DOCUMENT RESUME

ED 438 054 PS 028 253

AUTHOR Winter, Suzanne M.
TITLE The Early Childhood Inclusion Model: A Program for All Children.
INSTITUTION Association for Childhood Education International, Olney, MD.
ISBN ISBN-0-87173-148-7
PUB DATE 1999-00-00
NOTE 247p.
AVAILABLE FROM Association for Childhood Education International, 17904 Georgia Avenue, Suite 215, Olney, MD 20832. Tel: 800-423-3563 (Toll Free); Web site: http://www.udel.edu/bateman/acei.
PUB TYPE Guides - Non-Classroom (055) -- Reports - Descriptive (141)
EDRS PRICE MF01/PC10 Plus Postage.
DESCRIPTORS Classroom Environment; Cooperation; Curriculum; *Disabilities; *Diversity (Student); *Early Childhood Education; Educational History; Educational Policy; *Inclusive Schools; Mainstreaming; Models; Preschool Curriculum; Program Descriptions; Staff Development; Student Evaluation; Teacher Role; Teaching Methods; Young Children

ABSTRACT

Noting that the provision of early childhood education (ECE) services to linguistically and culturally diverse groups of children representing a wide range of abilities and income levels requires the scrutiny of current systems and practices, this book proposes a new paradigm of early childhood education, the Early Childhood Inclusion (ECI) Model, that promotes the design of programs that are inclusive of all children. Chapter 1 of the book summarizes background information on inclusion, outlines the historical context for the model, and offers a rationale for adopting a comprehensive definition of inclusion in ECE. Chapter 2 describes the characteristics, goals, theoretical foundations, and major components of the ECI Model. Chapter 3 describes the socio-organizational contexts that teachers using the ECI strive to implement. Chapter 4 emphasizes the creation of personalized learning environments that afford teachers the flexibility to match their teaching strategies to individual learning styles and abilities. Chapter 5 includes discussions on accommodating each child through an assessment-driven instructional planning cycle and by using alternative assessment. Chapter 6 details instructional strategies, focusing on the teacher as a mediator of children's learning environments. Chapter 7 concludes the book by proposing future directions for policy development, personnel preparation, and research to advance and solidify the inclusion movement in ECE. Each chapter contains references. (KB)

Reproductions supplied by EDRS are the best that can be made
from the original document.

ED 438 054

The Early Childhood Inclusion Model

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
X This document has been reproduced as received from the person or organization originating it.
☐ Minor changes have been made to improve reproduction quality.
• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

a program for all children

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL HAS BEEN GRANTED BY
A. W. Bauer
TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

Suzanne M. Winter
The University of Texas at San Antonio

PS 028253

BEST COPY AVAILABLE

The Early Childhood Inclusion Model

a program for all children

Suzanne M. Winter
The University of Texas at San Antonio

Association for Childhood Education International
17904 Georgia Ave., Ste. 215, Olney, MD 20832
800-423-3563 • www.udel.edu/bateman/acei

Anne W. Bauer, Editor
Bruce Herzig, Editor
Deborah Jordan Kravitz, Production and Design

Copyright © 1999, Association for Childhood Education International
17904 Georgia Avenue, Suite 215, Olney, MD 20832

Library of Congress Cataloging-in-Publication Data
Winter, Suzanne.
The early childhood inclusion model : a program for all children / Suzanne M. Winter.
p. cm.
Includes bibliographical references.
ISBN 0-87173-148-7 (paperback)
1. Inclusive education--United States. 2. Early childhood education--United States. 3. Handicapped children--Education (Early childhood)--United States. I. Title.
LC1201.W56 1999
371.9'0472--dc21 99-12815
CIP

TABLE OF CONTENTS

Preface ---------- 5

PART I—PRESENTATION OF THE MODEL

CHAPTER 1—*Historical and Social Perspectives* ---------- 13
New Challenges for Early Childhood Professionals
Arriving at a Comprehensive Definition for Inclusion
School Reform and Restructuring
Advocacy for Inclusion
The Challenge for Early Childhood Education
Conclusion

CHAPTER 2—*Description of the ECI Model* ---------- 43
The Rationale
Ten Major Characteristics
The Goals of the ECI Model
Theoretical Foundation
Curriculum and Approaches
Family and Community
Administration and Personnel
The Learning Environment
Assessment and Evaluation
Key Contrasts

PART II—IMPLEMENTATION OF THE MODEL

CHAPTER 3—*The Socio-organizational Climate* ---------- 85
Creating a Positive Atmosphere for Learning
Supporting Children's Social and Emotional Development
Early Identification and Intervention
Conclusion

CHAPTER 4—*Designing Learning Environments* ---------- 127
The Role of the Environment
Concerns and Challenges
Goals
Preparing Teachers for Their Role
Setting the Stage for Learning and Inclusion
Applying Research in Inclusive Learning Environments
Conclusion

CHAPTER 5—*Curriculum & Instruction* ---------- 163
Aiming for Individual Accommodation
The Rationale for Accommodating Learners
Challenges and Barriers to Accommodation
Effective Planning Methods
Assess To Inform Instruction
Differentiated Learning Experiences and Teaching Strategies
The Teacher's Role in Accommodating Children
Conclusion

CHAPTER 6—*Teaching Strategies & Accommodations* ---------- 203
A Repertoire of Instructional Strategies
Naturalistic Strategies
Socio-Contextual Strategies
Explicit Strategies
Technology-Based Strategies
Communication-Based Strategies
Differential Effects of Strategies
Validating Inclusive Practices
Conclusion

PART III—FUTURE DIRECTIONS

CHAPTER 7—*The Future of Inclusion and the ECI Model* ---------- 237
Policy Development
Personnel Preparation and Staff Development
Research
Conclusion
Closing Thoughts

PREFACE

Ms. Harrison's Kindergarten

Over the last 10 years, Ms. Harrison has noticed an increased diversity among her students. The socioeconomic levels of the children's families span from poverty to middle class. These families are both linguistically and culturally diverse. This year, two children in her kindergarten class are African American, more than half are Hispanic, and two boys are Japanese. Four different languages are used: English, Spanish, Japanese, and American Sign Language. Reynauldo, who recently immigrated from Mexico, speaks Spanish at home. Ikufumi and Takia understand only Japanese. Three youngsters who are deaf or hard of hearing are acquiring manual sign language as their primary mode of communication. Dina, who has cerebral palsy and cannot walk without assistance, also is included in this classroom. She either crawls on the floor or uses her walker to get from place to place. For mobility outside the classroom, Dina uses a wheelchair.

A full-time aide is assigned to assist Dina. A sign language interpreter is present in the classroom at all times to facilitate communication with the children who are deaf or hard of hearing. Ms. Harrison co-teaches with a special education teacher who specializes in deaf education. In addition to Ms. Harrison and the special eduation teacher, two English as a Second Language (ESL) teachers, a speech therapist, and a physical therapist are in the classroom part time. This team of professionals plans together regularly to coordinate their efforts. A specialist certified to teach children who are gifted and talented is also a member of the planning team. This teacher ensures that Daniel, Amy, and Martina have resource materials and can participate in learning experiences that provide a level of challenge matched to their abilities.

Ms. Harrison finds teaching today to be more complex and challenging than when she first started her teaching career. She is glad the school administrators are responsive to her requests for additional resources and offer relevant staff development opportunities.

Purposes

Today, typical early childhood settings in the United States serve linguistically and culturally diverse groups of young children who represent a wide range of abilities, income levels, and other characteristics. Demographic data reveal that this diversity is increasing, and the trend toward including children with disabilities in community

early childhood settings is also burgeoning. Other nations are experiencing similar demographic changes that result in greater diversity and social problems (Stedman, 1997). Considering these new trends and changes, scrutiny of current systems and practices used in the care and education of young children is warranted. Many questions must be addressed, such as:

- In what ways must theory and practice in early childhood education change to better serve all children today?
- Which program quality indicators hold true when groups of children are increasingly diverse?
- Which strategies and practices are likely to be most effective for enhancing the learning of young children in diverse groups?
- How can teachers include all children when the span of abilities represented is wide?
- How must the role of early childhood caregivers and teachers serving diverse groups change to meet the individual needs of these children and their families?

To arrive at valid answers to these and other questions, early childhood professionals need an accumulated base of empirical research. While a number of practices for promoting the inclusion of all young children appear promising, they must be validated in a variety of early childhood settings. Until such a research base is established, however, early childhood practitioners need, at the very least, tentative directions and guidance.

This book proposes a new paradigm of early childhood education that promotes the design of programs that are inclusive of all children, regardless of their differences. The inclusion perspective presented in this book merges theory and practice across multiple disciplines and fields of education. In an effort to provide leadership to the early childhood profession, the purposes of this book are threefold: 1) to offer a more comprehensive definition of inclusion; 2) to propose a conceptual model for early childhood programs, the ECI Model, that operationalizes this definition of inclusion; and 3) to suggest practical strategies for implementing this program model in early childhood settings.

Terminology

Originally, the term "inclusion" described a philosophical stance toward integrating children with disabilities into general education settings. More recently, however, some have asserted that children with other characteristics or learning needs, such as those who are linguistically diverse or those who are gifted, also thrive in learning environments that are inclusive (see Chapter 1 for discussion). In this book, the concept of "inclusion" represents a convergence of theoretical positions and practices.

I began to explore the possibility of this convergent stance for inclusion in the article "Diversity: A Program for All Children," which appeared in *Childhood Education* (Winter, 1994/95). In this article, I compared the tenets of the multicultural education field and those of the movement to include children with disabilities in

general education settings. I found commonalities and points of intersection that had implications for designing early childhood programs for diverse groups of children. Subsequently, I used an interdisciplinary approach to expand my inquiry across more than seven disciplines and fields of study. As a result of my research, I have come to view the concept of inclusion differently. Therefore, I propose a more comprehensive definition for the term "inclusion." In this book, the term "inclusion" is defined as follows:

> Inclusion is a commitment that all children,
> regardless of their differences,
> shall receive support and accommodation to ensure their success,
> and to preserve their right to learn
> among their peers.

"Early childhood education" is used in this book to encompass a full range of programs designed to serve young children, including those with special learning needs, from birth through age 8. The focus of this book is on group configurations for providing services, public and private, to young children from infancy through the primary grades. While some authors use the term "early childhood education" to mean more structured school-like environments for young children, the closely intertwined nature of learning and nurturing is well recognized. Consequently, attempting to separate these two pursuits would not accurately reflect high quality programming. Furthermore, in 1991, the Carnegie Foundation urged the bridging of services provided by "day care" and "preschool" personnel through the development of common standards. This view recognizes that both "care" and "education" are needed throughout early childhood to foster the development of the whole child (Boyer, 1991). Therefore, child care, early intervention, preschool, kindergarten, and the primary grades are included in my use of the term "early childhood education." Likewise, "teacher" is used as a universal term, referring to practitioners and personnel directly involved in the care and education of young children. The terms "strategies," "techniques," and "practices" are used interchangeably when discussing the various approaches or methods to teaching.

Discussions in this book are not limited to a specific population of children related by a single variable, such as culture, socioeconomic status, gender, language, ability, or disability. Instead, this book addresses diverse groups of children representing a full array of variables and human differences. While this book focuses on meeting the needs of all children within a full range of ability levels, much attention is given to including children at the margins of the span. Another reason I have not delimited the population addressed in this book is the recognition that early childhood professionals are on the front lines in identifying children who may warrant special services. For example, some children may have congenital, medical, neurological, mental, or other conditions that have gone undetected, or they may have yet to present sufficient symptoms for diagnosis. Children with learning disabilities, attention deficit disorder, emotional disturbances, and those who have suffered abuse, to

name only a few examples, are often difficult to diagnose during the early childhood years. Children who are gifted also can remain unidentified during early childhood. Consequently, a large number of children may experience delays in receiving services from specialized personnel. This means that early childhood teachers may have children in their groups who are insufficiently challenged, evidence delayed or atypical developmental patterns, or exhibit problem behavior. Also, many children are "at risk" of failure in school due to poverty, homelessness, unstable families, and/or parental substance abuse.

The reality is that early childhood professionals today must know and be prepared to use a sizable repertoire of strategies in order to include young children with various characteristics and from a variety of family backgrounds. Therefore, it is critical to design early childhood programs that seek to identify children's strengths and accommodate their individual differences. If a program is inclusive from the start, most children will experience success without ever having to be segregated from their peers.

Intended Audience

This book is intended for early childhood professionals who are concerned with providing high quality care and optimal learning environments for diverse groups of young children who represent a wide range of abilities, languages, cultures, socioeconomic levels, and other differences. The intent is to provide a resource for early childhood professionals functioning in various roles, such as educators involved in personnel preparation, teachers, administrators, specialists, and other practitioners. The goal of this book is to help these professionals more effectively serve diverse groups of young children across early childhood contexts.

Despite limited research to guide their efforts, early childhood teachers are implementing programs and selecting practices they hope will include all children (Winter & Van Reusen, 1997). Clearly, addressing this challenge requires not only grounding in the theory and pedagogy of traditional early childhood education, but also knowledge across various disciplines, fields, and strands of research. To effectively implement inclusion programs, early childhood teachers must acquire salient information and strategies from special education, bilingual education, gifted education, environmental psychology, gender and women's studies, and other areas of study. Not only is such an undertaking exceedingly complex, the lack of teachers in specialized fields means that typical early childhood teachers may have few opportunities for collaboration or consultation with specialists. Consequently, teachers need a model for effecting a philosophy toward inclusion in early childhood education that provides a multidisciplinary framework for designing appropriate learning environments, collaborating with families and other professionals, selecting curricular activities, and implementing inclusive practices. The Early Childhood Inclusion Model (hereafter referred to as the ECI Model) proposed in this book was developed to address these needs.

Development of the ECI Model

Clearly, one of the primary intents of this book is to advance work toward creating

program models for implementing a comprehensive definition of inclusion in early childhood settings. The development of the ECI Model is the result of my search for more inclusive program models, methods, and practices. The model was developed using an interdisciplinary approach to exploring research and professional literature across various fields of education and related disciplines. Consequently, the ECI Model was informed by theory and practice in traditional early childhood education, child development, special education, multicultural education, bilingual education, gifted education, gender and women's studies, and instructional technology. The disciplines of sociology and psychology, particularly environmental psychology and child psychology, also influenced certain aspects of the ECI Model. Various strands of research were examined, including those addressing teacher effectiveness, play therapy, and teaching learning strategies. Rather than treating each line of research separately, as often has been done, this model blends theories and integrates practices across various fields and strands of research.

The paucity of empirical research leaves the arena of early childhood inclusion open for innovation. Consequently, the proposal of the ECI Model invites readers to venture into territory that remains relatively uncharted, and to view inclusive approaches to early childhood education from fresh perspectives.

Major Themes

There are three major themes that unite the chapters of this book and interact with the various aspects of the ECI Model. The central theme is the idea of establishing and maintaining a focus on children's strengths and abilities as a compass for designing and implementing an inclusive early childhood program. The goal from this perspective is to identify areas of strength and to actively pursue increasing those abilities. All children have greater chances for achieving success and developing a balanced palette of skills when their talents are emphasized. Such an orientation seeks to empower children by recognizing their individuality, and by emphasizing the attainment of both personal and group goals. Thus, maintaining a focus on ability is a significant step toward achieving greater inclusiveness in early childhood programs.

A second theme is the exploration of how to offer children legitimate challenges that advance their learning across all domains of development. While social integration is an important aspect of early childhood inclusion programs, children also should have opportunities to develop as a "whole child." Engaging in a variety of rich learning activities with their peers, at appropriate levels of challenge, can enhance growth and learning across all developmental domains. This book invites readers to explore ways to accomplish these goals through curricular accommodations and various types of instructional strategies matched to children's strengths.

Finally, the third theme addresses the ecological aspects of implementing early childhood inclusion programs. The author examines ways that the roles and relationships among professionals, families, and the community can be redefined from this perspective to achieve more effective inclusion for all children. Varying degrees of participation and involvement by all stakeholders during the planning and implementation processes are discussed.

Overview of Content and Organization

This book is a balanced mix of conceptual and practical content. While the research that informed the conceptualization of the ECI Model is presented, implementation of the model also is emphasized. Illustrations and examples should help clarify the ways that the ECI Model can be implemented in various early childhood settings.

The seven chapters of the book are organized into three parts that delineate the presentation of the model, the implementation of the model, and future directions. Chapter 1 summarizes background information on the concept of inclusion. The historical contexts, including the social and political factors, that served as the basis for the ECI Model also are outlined in this chapter. The reader is offered a rationale for adopting a comprehensive definition of inclusion in early childhood education. Chapter 1 also expands the reader's understanding of the challenges early childhood professionals face when serving diverse groups of young children.

Chapter 2 describes the characteristics, goals, theoretical foundations, and major components of the ECI Model, which is proposed as a framework for program design. Early childhood professionals who are developing new programs or restructuring existing ones may benefit from the information provided. Readers also are encouraged to evaluate critical components of existing programs, to determine if these elements are conducive to inclusion.

Chapters 3 through 6 provide readers with an in-depth look at creating and maintaining a rich venue of opportunities that support the learning of children, both as individuals and as members of a community. Teaching strategies, socio-organizational and physical aspects of the learning environment, and instructional methods are explored, as is their interplay. Chapter 3 describes the socio-organizational contexts that teachers using the ECI Model strive to implement, focusing on those components that help prevent problem behavior. The second thrust of the chapter addresses an ecological approach to identification and intervention when children with problem behavior are included in early childhood settings.

Chapter 4 asks readers to examine early childhood environments from the perspective of the more comprehensively defined notion of inclusion. It emphasizes the creation of personalized learning environments that afford teachers the flexibility to match their teaching strategies to individual learning styles and abilities. Traditional environments are re-examined; readers will learn about some of the problems of designing both indoor and outdoor environments for early childhood inclusion programs. Approaches to creating effective environmental designs are proposed throughout.

Chapter 5 includes discussions on accommodating each child through an assessment-driven instructional planning cycle, and by using alternative assessment. Since collaborative roles for professionals are important, the concepts of team planning, co-teaching, and implementing concurrent learning opportunities for young children are addressed. Readers will find strategies for establishing and maintaining productive relationships among teachers, specialists, and people in the broader community. The administrators' role of providing leadership and guidance also is defined.

In Chapter 6, the reader encounters several categories of instructional strategies that are particularly applicable for enhancing the learning of diverse groups of young children in early childhood inclusion programs. This chapter focuses on the teacher as a mediator of children's learning environments, exploring strategies and techniques to facilitate children's interactions with physical objects and features of the learning environment. Suggested methods to help maximize the social, cognitive, and language learning opportunities of children as they work and play together also are included in this chapter. Implications for teaching in early childhood inclusion programs are drawn from research that analyzes teacher effectiveness and various approaches for enhancing the learning of young children. Examples and vignettes illustrate applications of this research in various early childhood settings.

The book concludes in Part III by proposing future directions for policy development, personnel preparation, and research to advance and solidify the inclusion movement in early childhood education. Chapter 7 asks readers to envision the impact of adopting a broader definition for inclusion in early childhood programs, and to consider ways of achieving those goals.

In Closing

A key intention of this book is to dispel the myths about teaching children with diverse backgrounds and abilities. One such myth is that teachers schooled in specialized fields have acquired some mystical set of strategies, or that they have a great deal more patience than general early childhood teachers. Certainly, a magic set of skills or techniques does not exist! Unfortunately, such myths can undermine the self-confidence that teachers need for successful implementation of inclusive early childhood programs. Teachers need assurance that they *can* be teachers of all children. Teachers may be surprised to discover that they already possess many of the strategies needed to respond to children with various learning needs. Training can boost their confidence, help them to match these strategies to learners, and increase their range of techniques. This book is intended to increase that confidence, dedication, and competence.

Author's Note: *Names used in cases and examples throughout the book have been changed to protect the confidentiality of individuals. The author has endeavored to balance the use of children's names by gender, thus avoiding the need for the use of "he/she" designations.*

References

Boyer, E. L. (1991). *Ready to learn: A mandate for the nation.* Princeton, NJ: The Carnegie Foundation for the Advancement of Teaching.

Stedman, L. C. (1997). International achievement differences: An assessment of a new perspective. *Educational Researcher, 26*(3), 4-15.

Winter, S. M. (1994/95). Diversity: A program for all children. *Childhood Education, 71*(2), 91-95.

Winter, S. M., & Van Reusen, A. K. (1997). Inclusion and kindergartners who are deaf or hard of hearing: Comparing teaching strategies with recommended guidelines. *Journal of Research in Childhood Education, 11*(2), 114-134.

Part I

Presentation of the Model

CHAPTER 1

Historical & Social Perspectives

KEY QUESTIONS

- *What are the major challenges for modern early childhood professionals?*
- *What are the characteristics and needs of young children and their families today?*
- *What is the new, comprehensive definition for inclusion upon which this model is based?*
- *Which significant historical occurrences and social trends have provided the background contexts for the development of the ECI model?*

We live in a remarkable period in the history of American education. Reform is in the air; from the White House to the schoolhouse, there is a broad consensus that a major restructuring of our education system is needed. While most of the restructuring proposals now being discussed are still at the rhetorical or pilot stage, there is one area in which actual reform is proceeding at a remarkable rate. This is the area of early childhood education. (Slavin, 1994, p. 1)

NEW CHALLENGES FOR EARLY CHILDHOOD PROFESSIONALS

Few would debate the notion that the fundamental tasks of caring for and educating young children have become increasingly complex and challenging across the globe. As technology makes the far corners of the earth more accessible and increases the mobility of people, societies throughout the world are growing more interconnected. Furthermore, populations are becoming increasingly heterogeneous and ideologically complex.

In the United States, social thought continues to grow toward favoring the integration of groups and individuals previously segregated from the mainstream of society because of ethnicity, gender, abilities, or other differences. Analysts predict that future generations will assume membership in a diverse global community composed of societies that are more economically interdependent than in today's world. The number of blue collar jobs for workers with rudimentary academic skills will shrink. Instead, globally competitive economies will demand a highly skilled workforce with well-developed communication, literacy, and problem-solving skills (Berman, Minicucci, McLaughlin, Nelson, & Woodworth, 1995; Darling-Hammond, 1996; Iran-Nejad & Marsh, 1994). The goal of preparing children for living in this technologically advanced, diverse world is gaining recognition as a critical mission for early childhood education.

Modern early childhood programs must prepare children for life in a technologically advanced, diverse, global society.

In the United States, young children in early childhood settings today represent greater diversity and a wider span of abilities than ever before. Early childhood programs typically include children with a full range of abilities, from various socioeconomic levels and cultures, and who speak minority languages. Caregivers and teachers reflect varying levels of consciousness toward this diversity and responsiveness to individual children's unique qualities. The trend clearly points toward the integration of *all* children in general early childhood settings, rather than segregating certain children into categorical programs. Consequently, early childhood professionals need a model to guide them in designing programs and implementating practices that are more inclusive than those based on traditional early childhood education paradigms.

In the past, it was assumed that children who did not fit the usual expectations would receive remediation, or that they would be relegated to special services, programs, or schools. Worse still, some children actually were denied access to any services. Fortunately, views are changing about how to address diversity and a wide range of ability levels. Likewise, the lines of distinction between general early childhood education and specialized fields are blurring. Thus, teachers' roles must be redefined and preparatory programs rethought so that early childhood professionals can better guide the developmental learning of children with diverse characteristics.

Preparing diverse children for life in a modern global community requires changes in traditional paradigms of early childhood education.

It is critical for early childhood professionals to identify approaches that promote inclusiveness and to establish a clear, theoretical stance for inclusion models. While many characterize the theoretical foundations and pedagogy in early childhood education as "eclectic," it is apparent that we need to draw from an even broader range of professional literature and research. Early childhood professionals must glean information from other fields, such as special education, multicultural education, and bilingual education, as well as from research addressing gender equity and giftedness. Blending these different fields of education and looking for applications suggested by different research strands is vital for effectively nurturing all children's growth and developmental learning.

ARRIVING AT A COMPREHENSIVE DEFINITION OF INCLUSION

Originally, the term "inclusion" was used to describe the commitment toward educating children with disabilities, to the maximum extent appropriate, in schools or classrooms they would otherwise attend if they had developed typically (Rogers, 1993). A number of credible advocates for children, however, have influenced the reconceptualization of the term "inclusion" presented in this book. In 1992, the National Association of State Boards of Education (NASBE) published a report, *Winners All: A Call for Inclusive Schools*, that called for greater efforts to serve increasingly diverse populations of children. NASBE recommended that the fields of general and special education forge a new relationship, with the goal of achieving more successful school outcomes for children representing a full range of abilities. The emphasis of this "inclusive system of education" (p. 4) would be to improve instruction for all children, rather than labeling and segregating some children away from learning opportunities in the mainstream.

An increasing number of proponents are calling for an end to labeling children and pulling them out for special services (Baker, Wang, & Walberg, 1994/1995; Wang, Reynolds, & Walberg, 1994/1995). Advocates for children who are gifted suggest

that services be provided to these children within general education classrooms, as well (Renzulli, 1994; Renzulli, 1994/1995; Sapon-Shevin, 1994/1995). Participation in segregated or pull-out programs poses certain risks, even those for children who are gifted. Segregating children, even for positive reasons, can result in stigmatization and harm to their self-esteem (Sapon-Shevin, 1994/1995). Many believe that inclusive schools can meet the needs of all learners, including those with special learning needs (Deiner, 1993; Falvey, Givner, & Kimm, 1995; New & Mallory, 1994; Stainback & Stainback, 1995; Villa & Thousand, 1995).

The trend is strong for favoring the right of all children to learn among their peers in general early childhood settings, unless it is not in the best interests of an individual child. Consequently, this book proposes a more comprehensive definition for inclusion.

Inclusion is a commitment that all children, regardless of their differences, shall receive support and accommodation to ensure their success, and to preserve their right to learn among their peers.

This concept of inclusion recognizes that meeting the goals of inclusion for some marginalized groups of children, but not others, sustains educational inequities. To achieve true inclusion, it is vital to preserve the right of *each* child to pursue individual goals while participating in educational experiences with peers. While the concept of inclusion presented in this book retains the strong commitment toward integration of children with disabilities, the scope of the construct is larger. Inclusion is reconceptualized as a commitment to accommodate the individual needs of all children, including those in marginalized groups, such as racial, ethnic, or language minorities, within the mainstream systems that care for and educate children. Consequently, the notion of inclusion proposed in this book no longer focuses solely on including children with disabilities. Instead, it emphasizes identifying the strengths and supporting the learning of children whose abilities and backgrounds span a full range. It does not assume that children with high ability will develop and learn with little or no extra support compared to children of lesser ability. It does assume that facilitation of development and learning is critical for all children, although the type and degree of support needed will vary for each child. This reconceptualization of inclusion is built on three main premises:

Premises for Inclusion

- All children have the right to be educated with their peers, unless evidence proves it is not in a child's best interests.
- Educators must be committed to educational equity, with all children having opportunities for high-quality, challenging learning experiences.
- The unique qualities of individual children must be accommodated within a diverse group.

Early childhood professionals would do well to address these underlying assumptions when designing and implementing early childhood programs. Consequently, these basic premises will be addressed throughout this book as the ECI Model is described.

This newer interpretation of inclusion represents a serious movement away from any program that isolates children because of a difference, unless a compelling reason can be demonstrated for serving a child outside the mainstream. Earlier views of education favored two contrasting positions. One stance expected children with differences to conform, and it sought the homogeneity of groups. The opposite position segregated or excluded children with differences. Today, many would argue that inclusion in diverse learning environments affords children a wealth of opportunities to develop social and other skills that will prepare them for later life in a pluralistic, global society (Darling-Hammond, 1996; Mallory, 1994). Consequently, the comprehensive definition of inclusion offered in this book represents a commitment to provide all children with equitable opportunities to grow, develop, and learn within heterogeneous groups of their peers. It also represents a commitment to ensure that these learning opportunities are appropriate and challenging for individual children, regardless of race, ethnic background, socioeconomic status, language, gender, or ability.

UNDERSTANDING DIVERSITY AND THE CHANGING NEEDS OF CHILDREN

To better understand the rationale for the ECI Model and the need for a more comprehensive definition, one must be cognizant of the changing needs of young children and their families. This following section will describe the extent of the diversity and the breadth of abilities present among typical groups of young children in the United States. Some of the social ills of the nation that contribute to the changing needs of children and their families also will be discussed.

Increasing Cultural and Linguistic Diversity

The most rapidly growing population of children in the United States are those in minority groups. According to the 1990 U.S. Census Report, the U.S. is experiencing the largest wave of immigration in its history (U.S. Bureau of the Census, 1990). Projections indicate that by 2020, 46 percent of the school-age population in the United States will be children of color (Pallas, Natriello, & McDill, 1989).

Increased immigration results in greater linguistic diversity among the nation's population. In the United States, more than 40 percent of children identified as "Limited English-Proficient" (LEP) are immigrants. The 1990 census reports that 9.9 million school-age children are from language minority families (U.S. Bureau of the Census, 1990). Studies suggest that 1 in 5 of these children will have trouble in school. While Spanish is the native language spoken by most LEP children, 24 of the largest metropolitan areas in the United States have 10 or more different languages spoken, and Los Angeles has more than 90 (Berman et al., 1995).

Unfortunately, majority language speakers often treat children who speak a minority language as though they have a disability (Cummins, 1993; Nieto, 1993). To stop such treatment, some schools avoid use of "limited proficiency" labels to describe a child's second language capabilities (Fern, 1995). The phrase "Limited English Proficiency," commonly used in the United States, suggests an underlying negative implication toward languages of minority groups.

Despite laws intended to promote equity, children who are linguistically and culturally in the minority still may experience prejudice in various forms during their schooling (Wink et al., 1995). Some schools, however, report a strong commitment to recognizing and advancing the abilities of children who are economically, linguistically, and culturally diverse. For example, the nationally recognized Oyster Bilingual Elementary School in Washington, D.C., is an exemplary school with high academic standards and high student achievement. The school staff appear to value children's diversity and to share a sense of vision concerning the school's mission of preparing all children for life in the modern global community (Fern, 1995).

Unfortunately, after 20 years of progress, the narrowing of the education gap for children from minority groups has come to a halt (Children's Defense Fund, 1997). Disproportionate numbers of minority children qualify for special education services. Furthermore, minority children with limited English proficiency are more often referred to special education services. Often, these children have had no support for their primary language development before the referral. Flaws in the diagnostic system appear to contribute to this inequity. When a child's first language is different from that of the majority, professionals must ensure fairness, especially during diagnostic assessment processes. The evaluations should be conducted by a professional who is fluent in the child's first language and trained in the assessment of linguistically and culturally different children (Cicchelli & Ashby-Davis, 1986; Harry, 1992).

Poverty

Poverty levels for children in America are shockingly high. Despite the country's great wealth, child poverty rates are at their highest levels in over three decades (Children's Defense Fund, 1995). Even as the gross national product indicates that the nation is becoming richer, children are becoming poorer. Twenty-one percent of the children in the United States are living in poverty. Children in America are more likely to be poor than those in other industrialized nations, such as Canada, Great Britain, and France. Economically, German, Dutch, and Swedish children fare 7 to 13 times better than children in America (Edelman, 1994). The number of young families affected by poverty has nearly doubled in the last 20 years (Olsen, 1994). Of the 14.7 million children living in poverty, 6 million are under the age of 6 (American Broadcasting Corporation, 1996; Children's Defense Fund, 1997). Regrettably, younger children are more likely than older children to be living in poverty. Twenty-seven percent of children younger than 3 are living in poverty. This inverse relationship between poverty and age means that younger children suffer the greatest toll. Young children living in poverty conditions are more likely to die before their first birthday; those who survive are more likely to suffer stunted growth, iron deficiency,

and severe asthma. These children are more likely to evidence emotional disabilities by their teen years, have low school performance, and become victims of child abuse or neglect (Children's Defense Fund, 1997). Poverty strikes children of ethnic minorities at high rates, with 42 percent of African American children and 40 percent of Hispanic children suffering poverty conditions (Children's Defense Fund, 1997).

Even before a child's birth, poverty triggers a constellation of problems that often affect the child for a lifetime. Poverty places children at risk for a wide range of physical, emotional, and social conditions that jeopardize their chances for success in school and future participation in the work force (Solow, 1994). Poor children are more likely to receive inferior child care and to attend schools that are ill-equipped with resources. The home life of these children offers few learning materials or enriching experiences to stimulate their development, and the stress of living at the subsistence level creates conflict and instability in their family relationships (Sherman, 1994).

Nobel Laureate economist Robert M. Solow (1994) contends that tolerating child poverty is unethical and expensive. He believes that it is economically feasible to significantly reduce such poverty, pointing to evidence of the availability of remedies that could reduce poverty, while actually saving money.

The cost of early intervention programs that improve a child's chance of success is a bargain, compared to the future costs of failure. For example, Head Start enrollment for a child costs approximately $3,800 a year, compared to spending $30,000 a year to incarcerate an adult. Poverty costs tens of billions of dollars in educational, medical, and other expenses. Child poverty is the most expensive because it robs a country of invaluable human potential. Research indicates that poverty is the single most influential variable in determining outcomes for children; indeed, it is even more influential than family structure, parents' level of education, race, or ethnicity. Rather than blaming poor parents, we must understand how poverty keeps parents from meeting their children's needs. Poverty-stricken families often face impossible financial choices that place their children at risk of harm and threaten the stability and security of the family structure. Strong community support for families in poverty can help provide safe housing, schools, and after-school and summer programs (Edelman, 1994).

Children Who Are Emotionally or Medically Fragile

Urban violence, homelessness, and family instability take their toll on young children. As a result, many children suffer psychological wounds. These children may exhibit bizarre reactions, unpredictable behavior, and arrested development during their early years. Professionals should take heed of such manifestations and provide more therapeutic environments in early childhood settings (Koplow, 1996).

A growing number of children are homeless or have suffered repeated displacements. Many of these children lead a tumultuous life of abrupt moves, family instability, and overwhelming poverty. These children frequently find it difficult to adjust to early childhood programs. Many homeless or displaced children suffer anger, disorientation, and anxiety as an aftermath of their difficult circumstances (Goodman & Curry, 1991).

In 1997, the Children's Defense Fund reported statistics that reveal the scope and seriousness of homelessness in America. Families with children account for 38% of the homeless population. In 1996, shelters in New York City housed 1 in 10 poor children under 5. Homelessness and shelter life lead to emotional turmoil, disruptions in schooling, health problems, and the break-up of families (Children's Defense Fund, 1997).

Unfortunately, the solution for homeless children and their families is not simply a matter of obtaining adequate housing. In New York City, one out of two homeless families that have acquired housing through city resources eventually returns to the shelter system. Some homeless families repeat this cycle several times, which indicates that their problems are more extensive than merely an inability to obtain affordable housing (Nunez, 1994). The profile of the typical homeless family in the United States reveals that a host of social ills influences their plight. In 50 percent of the cases, a young, single woman who is pregnant is the head of the household. These mothers typically lack a high school diploma and have little or no work experience. The chances are high that the mother has a history of substance abuse, and that she also is a victim of domestic violence. When comprehensive social interventions are lacking, the woman and her family are drawn into a downward spiral of homelessness and poverty (Nunez, 1996).

The number of children who are HIV positive or have symptoms of AIDS is also growing. A report issued by the Centers for Disease Control and Prevention (1992) revealed that over one million people are infected with the human immunodeficiency virus (HIV) in the United States. By June of 1993, AIDS had killed more than 194,000 persons, with 2,500 of these victims being children under 13. Approximately 10,000 children and youth under 25 have died of AIDS since 1981. The numbers of young victims of AIDS are rising; this disease is currently the sixth leading cause of death among 1- to 4-year-olds. Congenital AIDS has been associated with a myriad of mental and physical problems, including mental retardation, brain damage, and developmental problems (Centers for Disease Control and Prevention, 1992; LeRoy, Powell, & Kelker, 1994). Another cruel outcome of the AIDS epidemic is the thousands of children who are left orphaned (Children's Defense Fund, 1997). An estimated 58,000 children living in New York City will have suffered the loss of their mothers by the year 2001; more than 90 percent will be minority children (Working Committee on HIV Children and Families, 1996).

Modern technological advances, while obviously beneficial, also have led to new challenges. Specifically, advances in medical science mean that greater numbers of children with medically fragile conditions survive. Many of these children require sophisticated technological and medical support just to live. Concomitantly, the numbers of medically fragile children enrolling in early childhood programs is increasing. Consequently, the need for clear legal direction, different care and instructional practices, and the mobilization of financial resources within communities is critical. For example, an increasing controversy exists over schools' legal obligations (and the associated costs) to educate medically fragile children, as stated under the provisions for free, appropriate public education in the Individuals With Disabilities Education Act (IDEA). In some cases, the services needed for a child to participate in a general education setting are extremely costly in terms of time, personnel, and

money. Lawsuits increase as schools or individuals seek interpretation of the related services provision in IDEA (Rapport, 1996; Underwood & Mead, 1995). However, financial incentives or reimbursement could help schools provide more extensive, or costly, health care services. This trend may facilitate the movement toward greater collaboration between schools and health care professionals (Rapport, 1996).

A Greater Variation of Abilities

As a result of federal mandates, more and more children with identified disabilities are being served in general educational settings. In the 1991-92 school year, 69 percent of the 5 million school-age children with identified disabilities were placed in general education classrooms over 40 percent of the time (U.S. Department of Education Office of Special Programs, 1993). As children grow older, more disabilities are identified. In the 1992-93 school year, early intervention programs served 1.2 percent of all infants and toddlers, 4 percent of the preschool population (ages 3 to 5) was served by special education services, and by school age the number of children who received services increased to 8 percent. Although 90 percent of these school-age children had mild disabilities, the lack of early identification means that many were included in early childhood settings without special services and resources (U.S. Department of Education, 1994).

While labeling of children's disabilities that follows the identification process may be a self-fulfilling prophesy, whereby children do not exceed teachers' limited expectations, the provision of special services keyed specifically to the individual child is a distinct advantage (Heward, 1996). The effectiveness of early intervention is well documented (Safford, 1989). Moreover, intervention can be very beneficial when these services are provided in an early childhood inclusion setting.

Children who are gifted and talented often are represented in early childhood settings, as well. Identifying giftedness among young children is difficult, however, and our notion of what constitutes giftedness has changed over the years. The defining parameters have shifted from Terman's (1925) narrow definition of intelligence, which focused on superior cognitive abilities, to more inclusive modern conceptions. Guilford (1967, 1982) theorized a model that represents intelligence as a complex of 150 different factors. Renzulli (1978) recognized individual creativity and commitment to task, functioning in conjunction with high ability. Sternberg (1985) based his triarchic theory of intelligence on information processing abilities. A popular view of intelligence today is Howard Gardner's (1983) multiple intelligences model, which recognizes the existence of various domains of intelligence that correspond to different kinds of talents. *National Excellence: A Case for Developing America's Talent* proposed a more comprehensive definition of gifted children that encompassed a wider range of gifts and talents beyond sheer intellectual ability (U.S. Department of Education, 1993). However intelligence is characterized, Sternberg (1996) argues that IQ is just one attribute, and should not be used as the sole measure of a person's worth. He points out that no causal relationship has been established between IQ and societal outcomes for individuals, citing research that suggests societal outcomes are mitigated by additional factors, such as race.

The early childhood years are a critical period for nurturing gifts and talents (Tannenbaum, 1992); yet many early childhood settings fail to engage gifted children. Many people believe that children with exceptional ability will succeed on their own. They argue that extra resources and attention should be focused on children with less ability, who are, consequently, at greater risk of failure. Others, however, argue that curriculum and instruction must be differentiated to provide gifted children with individually appropriate levels of support and challenge. If the need for differentiation is ignored, apathy, underachievement, and social or behavioral problems may follow.

Allowing exceptional talents to lie fallow is a tragedy for the child and for all of society. Children with exceptional talents have the potential to offer amazing and invaluable contributions toward the betterment of the world (Davis & Rimm, 1994). Failure to recognize and nurture talent is an issue of particular concern to women. Females who are gifted tend to underestimate their abilities, making it difficult for them to reach their full potential. Low aspirations, poor self-esteem, and underachievement result from conflicts caused by issues of gender identity and perceptions of social acceptance. These barriers to achievement can result in lifelong losses for women in terms of personal satisfaction and socioeconomic standing (American Association of University Women, 1991; Hollinger & Fleming, 1988).

Among groups of children with special learning needs, young gifted children are notably underserved, as a result of the difficulty in identifying giftedness (especially in the very young child) and the lack of programs to address their needs (Barbour, 1992). In the United States, approximately 2 million children who are gifted and talented, from kindergarten age through high school, are served by specially designed programs (U.S. Department of Education, 1993). Some researchers believe that these figures actually represent less than half of the number of children who should be served (Clark, 1992). Criteria for gifted and talented programs vary by state, making it impossible to calculate the exact number of children in this category nationwide.

Identification of giftedness relies heavily upon subjective judgment (U.S. Department of Education, 1993). No single assessment tool has proven valid in detecting giftedness. With a more diversified view of giftedness, diagnosticians are abandoning their reliance on intelligence tests as a sole measure for identification. Moreover, empirical evidence has cast serious doubts on the validity of creativity or divergent thinking, such as highlighted in the Torrance Tests of Creative Thinking (Torrance, 1966, 1990). Research now indicates these tests are unable to predict creativity in real-world tasks. Furthermore, individuals' creativity appears to vary with the type of task encountered, and evidence suggests that creativity can be taught (Baer, 1993/94).

Children in modern early childhood settings typically represent a wide range of abilities and many individual variations.

It is also important to recognize that children have intraindividual variations of ability. Existing assessments and service delivery systems are often ill-equipped to

handle young children with high degrees of individual variation. Identifying and serving these children and their families requires innovative strategies. For example, children with physical, visual, hearing, or learning disabilities can possess areas of giftedness or exceptional talent (Maker, 1977; Maker, Nielson, & Rogers, 1994; Whitmore & Maker, 1985). Teachers and programs must support the learning of these children with whatever creative measures are necessary. Linguistically and culturally diverse children with intraindividual variations also require innovative programming strategies.

The strategies and supports needed to enhance the learning of children who are deaf can be complex. Trilingual language environments, in which children communicate with a combination of manual sign, their home language, and English, can be helpful (Christensen, 1993; Humphries, 1993). Typical diagnostic methods, however, may not recognize the exceptional abilities of young children who are gifted or talented, but not yet proficient in English. Neither is academic performance always a reliable indicator for identifying giftedness. Consequently, children who are acquiring English as a second language may not receive services addressing their giftedness (Ferguson, 1986).

These examples represent just a few of the many intraindividual variations in ability that exist among the young children served in early childhood inclusion settings. These cases point to the inadequacies of categorizing and labeling children when using arbitrary definitions or systems, and underscore the need for an inclusion philosophy that endorses curricular flexibility and an indomitable commitment to offering individually appropriate programs.

"At Risk" Children

The number of children considered "at risk" is growing. Overuse and misunderstanding of the term probably account for some of the increase, as there is a tendency to use this popular term vaguely and apply it broadly. Consequently, the use of the term "at risk" has precipitated confusion. Some use the term to describe children who have a greater chance of developing disabilities or experiencing problems in their development. In this sense, the term refers primarily to infants or toddlers whose birth conditions or home environments increase the likelihood of later referral for special education services. The term "at risk" also is used to describe children without disabilities who have factors or experiences that increase their risk of poor academic performance or social failure (Hardman, Drew, & Egan, 1996; Heward, 1996). Using this second connotation, some professionals believe that children living in poverty, those with cultural or linguistic differences, and those with behavioral problems or evidencing low academic performance in school are "at risk" (Duttweiler, 1992). Families headed by a single parent or parents with low educational preparation also place children "at risk" of school failure (May & Kundert, 1997).

It is important to understand, however, that the term "at risk" does not refer to the capacity of these children to succeed. Some children may be "at risk" because of the inadequacies of schools to address their characteristics and circumstances. Due to extreme shortages of trained personnel (Gersten & Woodward, 1995), for example, language-minority children are unlikely to receive any specialized assistance

(McKeon, 1994). Chamot and O'Malley (1994) and others contend that inadequate instruction is to blame for those difficulties in language and learning.

Unfortunate family circumstances, tumultuous home lives, and communities besieged by crime create a bleak prognosis for many children. In record numbers (18.7 million in 1994) children live in single-parent households, usually headed by their mother, and half of these children are living in poverty (Children's Defense Fund, 1997). It is well documented that children reared in single-parent households are more likely to:

- Have emotional and behavioral problems
- Suffer physical and sexual abuse
- Live in poverty
- Drop out of school
- Engage in violent crime
- Commit suicide (Whitehead, 1993).

Gender Differences

Differences in children attributable to gender appear gradually throughout childhood. During infancy, gender differences become apparent. For example, girls tend to become frightened and cry more easily than boys. It is interesting that by toddlerhood, girls are more calm than their male counterparts (Grossman & Grossman, 1994).

Maccoby and Jacklin (1974) used a constructivist approach to explain how children gradually develop concepts of gender. Rather than simply imitating their parents, children gather information from a variety of different sources and construct generalizations. Children attempt to match their behavior to the ideas they have constructed about their gender (Maccoby & Jacklin, 1974). Evidence shows that toddlers already have begun to construct some notion of appropriate behaviors for girls and boys. Fagot (1985) found that 20- to 24-month-old children reinforced their peers' gender-typical behaviors.

Studies of children's play lead to a better understanding of gender differences in young children. Infants begin to indicate preferences for certain toys and play materials as early as age 9 1/2 months (Kearsley & Zelazo, 1979). In examining these early preferences, several studies suggest an association between children's toy and equipment choices and their gender (Fein, Johnson, Kosson, Stork, & Wasserman, 1975; Kearsley & Zelazo, 1979; Winter, 1985). In one study, for example, toddlers playing at an outdoor playground exhibited sex-stereotypical preferences for toys and equipment. On the playground, girls preferred sedentary activities involving fine motor manipulation. Most frequently, they played in the sandbox with assorted toys. In contrast, boys engaged in more active play with toys and equipment that required more vigorous action and larger gross motor movements. They walked on balance beams, rode tricycles, and pulled each other in wagons (Winter, 1985).

As children reach their preschool years, gender differences increase and are even more pronounced. Play activities, choices of toys and props, and types of social interactions show striking differences between girls and boys. The dramatic play of

girls features more tightly structured story lines involving the correlation of specific roles. More so than boys do, girls choose domestic themes and assume roles that are gender stereotyped. Boys engage in less organized play, assuming roles that manifest more aggression and conflict. Typically, the boys' play is adventurous, exploratory, and physically active (Frost, 1992; Grossman & Grossman, 1994).

Some believe that the early gender differences manifested in children's play are the result of social learning. Evidence suggests that the expectations embedded in the socially or culturally transmitted messages typically received by girls undermine their academic self-confidence, especially in the areas of mathematics and science. Girls tend to attribute any school failures to their lack of ability. In contrast, boys often blame failure on external factors, such as the teacher, the difficulty of the material, or lack of resources. While research is mixed on the effects of gender on the overall self-confidence and self-esteem of children, girls who conform to gender-specific patterns of behavior fail to develop their full range of abilities in school and other endeavors (Grossman & Grossman, 1994; McCormick, 1994).

Girls and boys differ in emotions, relationships, communication, learning styles, and motivation toward success. Girls are typically less assertive, competitive, and aggressive than boys. They tend to seek approval from teachers and acquiesce to others more easily to maintain peace. Boys talk more directly than girls. In school, boys are able to garner more of the teacher's attention, and usually dominate mixed-sex group situations. These differences are more pronounced among children of European heritages in the United States than among African American children. Teachers tend to react more strongly to boys' disruptive behaviors, which could account for the higher number of boys placed in special education programs for emotional difficulties. It also could mean that some girls' emotional problems are unrecognized and left untreated (Grossman & Grossman, 1994).

Understanding the effects of gender on children's behavior is a complex undertaking. Physiological factors such as hormonal differences and variations in neurological development may result in the predisposition of males and females toward exhibiting certain behaviors. Children also are exposed to contextual factors, such as teachers' and parents' expectations, attitudes, and actions. The interplay of these variables influences the information children receive about what constitutes appropriate roles and behaviors for males and females within the sanctions of their cultural group, community, and family. Gender, alone, is not an accurate predictor of a child's behavior. Children's actions, responses, and interactions with others are influenced by a host of other factors, including ethnicity, socioeconomic status, and regional/geographical differences. Consequently, the kinds of gender-specific behavioral expectations transmitted to children are frequently different for each cultural and socioeconomic group. European American girls typically exhibit poorer achievement and a lack of self-confidence in the areas of mathematics, computers, and science, compared with boys. African American girls, however, do not conform to this pattern. They usually perform better than their African American male counterparts in these areas (Grossman & Grossman, 1994).

While the exact cause of gender differences is unclear, some of these differences cut across geography, ethnicity, and class. In examining educational, social, and economic outcomes, girls clearly fare worse than boys (Grossman & Grossman, 1994; McCormick, 1994; Perrett, 1988). By preschool, girls already entertain a much narrower range of career possibilities than that envisioned by boys (Perrett, 1988). While nontraditional fields are opening up for women's participation, women with comparable education and skills are still earning less than men working in analogous positions. Females are more likely to experience poverty, devaluation, and subordination (McCormick, 1994). These bleak outcomes make it imperative to establish gender-equitable teaching practices in early childhood settings. Teachers need to carefully examine the effects of their strategies and practices on the learning of both girls and boys. Understanding the gender differences of children in a particular community is a critical step toward gender equity in inclusive early childhood programs.

HISTORICAL AND SOCIOPOLITICAL CONTEXTS

Undoubtedly, the varied needs of America's young children are significant, and they have tremendous ramifications for early childhood teachers and caregivers. Recognition of this diversity and of children's profound needs has provided the major impetus for movements to reform schools and create more inclusive educational settings.

A confluence of movements concerned with various human rights and education issues also has resulted in progress toward more inclusive educational programs. Social, legal, and economic forces have interacted to provide a foundation for inclusive education in the United States. The following four major categories of concerns can be identified as having a fundamental influence on the move toward inclusive education: social issues of human rights and equity of educational opportunity, economic issues of the nation, increasing diversity of the population, and quality and effectiveness of educational systems. The social commitment toward inclusive education is codified in federal mandates designed to preserve the rights of people, regardless of ability, gender, ethnicity, or other differences. The following sections summarize the historical and sociopolitical contexts surrounding the movement toward inclusive education in the United States, as well as the emergence of the major concerns that provided the impetus for the movement.

Educational Equity

Equity of educational opportunity was the original intent of public education in the United States. Public schools were conceived as a way to provide an equal chance for children of immigrants to receive an education (Olsen, 1994). Unfortunately, the struggle to offer educational equity continues. Beginning in 1954, with the *Brown v. Board of Education of Topeka* ruling against schools segregated by race, the civil rights movement ignited an era of concern for children's rights to equal educational opportunities. The Civil Rights Act of 1964 guaranteed legal rights for African

Americans and other racial minorities. Unfortunately, racial and ethnic minority groups still must struggle for equal voice, opportunities, and education (Banks, 1993b; Darling-Hammond, 1996).

Social concerns for children and families with economic disadvantages also were addressed during this period. President Lyndon Johnson's War on Poverty forged the way for the establishment of the Head Start Project in 1965 (Crawford, 1991; Wortham, 1992). This project served young children, ages 3 to 5, from impoverished environments, with the intention of improving their chances for academic success. A comprehensive array of educational, medical, and family support services were provided to qualifying children and their families. In 1972, children with disabilities also received services from Head Start through the passage of the Economic Opportunity Act. This mandate required that children with disabilities must constitute at least 10 percent of the enrollment in Head Start projects (Bailey & Wolery, 1992).

The Head Start model's comprehensive approach to the provision of services to children and their families set a precedent. By targeting children from low socioeconomic levels who were frequently members of minority groups, however, Head Start has been criticized as exclusionary. While this program indicated concern for children with disabilities and those with economically disadvantaged environments, children enrolled in Head Start were still segregated from a full range of peers in the mainstream (New, 1994). Concern for children of economically disadvantaged families and minorities continued with passage of the Elementary and Secondary Education Act of 1965. *Lau v. Nichols*, 1974, would later extend that concern to language-minority groups (Crawford, 1991; Wortham, 1992).

Concern for Cultural and Linguistic Diversity

Cultural and linguistic diversity increasingly have been addressed as a matter of social policy and educational concern. The passage of the Bilingual Education Act of 1968, Title VII, an amendment of the Elementary and Secondary Education Act (ESEA), signaled the growing national concern for children of language-minority groups. This legislation was intended to address the educational needs of children with limited English proficiency (LEP) (Crawford, 1991; Freeman & Freeman, 1992). Its interpretation, however, touched off a period of controversy as Americans debated the goals of bilingual education programs. Advocates of a "melting pot" orientation believed language instruction should prepare children with limited English proficiency for assimilation into a monolingual, monocultural society. In contrast, others held the view that an understanding of different cultures is important, and that the development of children's home language should continue. Proponents of this perspective envisioned a multicultural and multilingual American nation (Seefeldt & Barbour, 1994).

Debates ensued regarding which language should be used for the instruction of children of language minority groups in schools, and to what extent children's language differences should be addressed. The responses of schools to the Bilingual Education Act of 1968 were carefully scrutinized and resulted in case law, most notably the *Lau* decision. In *Lau v. Nichols* (1974), the U.S. Supreme Court ruled that

TABLE 1:
SUMMARY OF LEGISLATION FOR CHILDREN WITH DISABILITIES

Date	*Legislation*	*Provisions*
1968	The Handicapped Children's Early Education Assistance Act (P.L. 90-538)	Established The Handicapped Children's Early Education Program (HCEEP), which developed early intervention demonstration models
1973	Section 504 of The Rehabilitation Act	Prohibits discrimination against qualified persons with disabilities in federally funded schools and preschools (e.g., Head Start)
1975	The Education for All Handicapped Children Act (EAHCA) (P.L. 94-142)	Free, appropriate public education for children with disabilities (ages 5-21): Individualized Education Program, least restrictive environment, parent participation
1986	Amendment to EAHCA (P.L. 99-457)	Extended services to children ages 3-5; Individualized Family Service Plan
1990	Americans With Disabilities Act (P.L. 101-336)	Prohibits discrimination against persons with disabilities in all settings, including community child care, afterschool programs, and private schools
1990	Individuals With Disabilities Education Act (P.L. 101 - 476)	Reauthorized P.L. 94-142, rights to children ages 3-21, used child-first language

under Title VI of the Civil Rights Act, children of language-minority groups were entitled to whatever special assistance was needed for equitable school participation. This ruling halted the practice of providing only native language instruction with no attempts to teach English as a second language. Furthermore, this decision afforded schools the flexibility to entertain a range of possible alternatives for providing appropriate instruction to children of language minorities. While politics and controversy continue to surround bilingual education approaches (Crawford, 1991), there is a growing recognition that "bilingualism" or "multilingualism" is a valuable commodity in our global community. Increasingly, dual or multiple language proficiency is being viewed as an ability that deserves nurturance and support in young children.

The civil rights movement ushered in an era of concern for the rights of children. Advocacy for children with disabilities has resulted in federal mandates to protect the rights of these children.

Rights for Children With Disabilities

Concern for civil rights and equal educational opportunities expanded to include children with disabilities, or those termed "at risk" of school failure. Federal mandates and resulting case law have spotlighted the rights of children with disabilities. During the 1970s, parents assumed a key role in establishing that children with disabilities have the civil right to gain an education. *Brown v. Board of Education of Topeka*, which established the inequity of separate education, and the Fourteenth

Amendment, which guaranteed a free public education for children, provided a strong basis for the legal remedies sought by these parents. These rights were upheld in court cases, such as *Pennsylvania Association of Retarded Children et al. v. Commonwealth of Pennsylvania, David H. Kurtzman, et al.* (1971) and *Mills v. Board of Education of the District of Columbia*, 343 F. Supp. 866 (D.D. C.1972). The accumulation of litigation consistently in favor of the rights of children with disabilities soon resulted in a legislative response. Federal mandates were established to better define the civil and educational rights of children with disabilities. Table 1 summarizes landmark pieces of legislation and their major provisions (Bailey & Wolery, 1992; Deiner, 1993; Underwood & Mead, 1995).

Subsequent case law demonstrates that the rights afforded to students with disabilities by legislation and the U.S. Constitution will be strictly enforced. *Holland v. Sacramento City School District*, 786 F. Supp. 874 (E.D. Cal. 1992), and *Oberti v. Board of Education of Clementon, New Jersey*, C. A. No. 91-2818, D.N.J. 8/17/92, are examples of cases in which individual children with disabilities won the right to be included in general education classrooms. In *Greer v. Rome City School District*, 950 F. 2d at 696, the court clearly gave schools the responsibility of accommodating the individual learning needs of children with disabilities in regular classrooms (Boundy, 1992; Rothstein, 1990; Underwood & Mead, 1995).

Contrary to popular belief, the term "inclusion" was not used in IDEA. Three major principles embedded in IDEA, however, have guided the inclusion of children with disabilities: 1) the Individualized Education Program (IEP), 2) Least Restrictive Environment (LRE), and 3) Parent Participation.

The first principle requires an IEP to be developed by an interdisciplinary team for each child who is eligible for special education [Sec. 1401(19)]. For younger children and their families, this principle requires the provision of an Individualized Family Service Plan (IFSP), as mandated by P.L. 99-457, Education of the Handicapped Act Amendments (1986). The team, including the child's parents, must develop a plan that specifies the goals, objectives, time lines, types of services required, and personnel involved in the child's program. This IEP determines the placement of a child with disabilities in an inclusive classroom (Turnbull, 1993).

LRE, the second principle [Sec. 300.550], requires that children with disabilities, including children in public agencies, private institutions, or other care facilities, be educated with children who are not disabled, to the maximum extent appropriate. Additionally, LRE requirements stipulate that removal of children with disabilities from the general educational environment can occur only when the nature or severity of the child's disability is such that education in regular classes with the use of supplementary aids and services cannot be achieved satisfactorily (Turnbull, 1993). Thus, LRE regulations favor the integration of children with disabilities into general education settings. Administrative or school convenience, consequences for children who are not disabled, and teacher preference should not influence placement decisions (Turnbull, 1993).

Third, IDEA regulations [Sec. 1400(c)] also protect parent participation requirements. In short, parents or guardians have a legal interest to protect the rights of

their disabled children in decisions regarding evaluation, classification, IEPs, LRE, and procedural due process. As such, IDEA provides parents the right to be involved in making instructional and placement decisions regarding their children.

A heightened awareness concerning persons with disabilities is having a broad impact on life in the United States. Changes have occurred in the way that buildings are constructed, employees are selected, and youth are educated. The range of educational, social, and care options open to children with disabilities today is unprecedented.

Gender Equity in Schools

Concern for equality of education for children, regardless of gender, also began to emerge as a national issue during the 1970s. The prohibition of discrimination on the basis of sex, mandated by the Civil Rights Act of 1964, was not applicable to children in schools. Consequently, more egalitarian treatment of girls and boys in schools was sought through the passage of Title IX of the Education Amendments Act of 1972. This mandate requires all children, regardless of gender, to have access to equal educational opportunities in schools. All school policies, requirements, and standards, such as those governing admissions and participation in programs, must be applied equally to girls and boys (Underwood & Mead, 1995). Although enforcement of Title IX was initially lax, the law gradually improved equity (Sadker & Sadker, 1994).

Addressing gender equity in schools, from early childhood settings and beyond, is vital to guaranteeing the civil rights of women and their proper representation in all realms of society. Gender equity has a bearing on the future of the world economies. By the year 2000, 66 percent of the entrants to the U.S. work force will be women. Consequently, 47 percent of the total labor force will consist of women. The demands for a highly skilled, educated work force, especially in technical fields, such as mathematics, science, and engineering, are rapidly increasing. Therefore, it is critical to ensure that girls receive educational support (American Association of University Women, 1991).

Support for Gifted and Talented Children

Giftedness also has gained increased recognition as part of the broad spectrum of children's diversity. Historically, however, concern and support for gifted and talented children in the United States have been inconsistent. A flurry of interest in giftedness occurred in the 1950s, when the launch of Sputnik focused national attention on the quality of education in America. Unfortunately, this interest faded until the late 1970s, when a legislative response was passed. In 1978, Title IX, Part A, The Gifted and Talented Children's Education Act provided additional services for children demonstrating high academic, leadership, or creative arts abilities. A short-lived period of program development, led by the federal Office of Gifted and Talented Children, ended in 1982 with the passage of the Education Consolidation Act. This mandate provided block grants to states for funding all special education programs, including those for gifted and talented children. Thus, decisions regarding allocations for gifted and talented programs and all other types of special services rested within the authority of individual states. In 1988, gifted education once again

received a boost with the passage of the Jacob K. Javits Gifted and Talented Student Education Act, part of the Elementary and Secondary Education Act (Seefeldt & Barbour, 1994). In 1990, however, a national survey indicated that only 2 cents for every $100 spent on the education of U.S. children K-12 was used for gifted and talented students (U.S. Department of Education, 1993).

SCHOOL REFORM AND RESTRUCTURING

During the latter half of the 20th century, the United States evolved from an agrarian society to an increasingly diverse industrialized society. Furthermore, technological advances have resulted in a globalized economy. More sophisticated communication, academic, and literacy abilities are needed in order for children to become full participants in the mainstream of modern societies. In the United States, calls for school reform and restructuring to address these changing needs have been widespread. Such steps require extensive re-evaluation of traditional philosophy, curriculum, and pedagogy (Berman et al., 1995; Darling-Hammond, 1996; Iran-Nejad & Marsh, 1994).

For more than a quarter of a century, the United States has led the movement toward providing more appropriate and equitable educational opportunities for all children. As the needs of marginalized children and their families are recognized, political, social, and education leaders are calling for care and education systems that reflect higher quality and greater inclusiveness (Boyer, 1991; Carnegie Task Force on Learning in the Primary Grades, 1996; Slavin, 1994).

Reform of American schools became a national priority in 1989 when President George Bush announced six goals to improve the education of children by the year 2000. He challenged the nation to find ways to help each child come to school ready to learn, reduce school dropout rates, and help all adults achieve literacy. Furthermore, Bush declared that schools should create drug-free, orderly environments that test children in core subject matter and offer superior math and science education programs.

The first goal, focusing on preparing children to learn, signaled a change in the nation's priorities. Rather than focusing solely on the outcome of schooling for children, Americans are shifting their attention to the quality of children's lives, care, and educational experiences before entering school (Boyer, 1991). As a result, greater attention has been focused on the early childhood years and on the development of high-quality programs to serve this age range. Moreover, it has led to calls for a more transdisciplinary approach in early childhood education. Efforts to achieve greater coordination among organizations, schools, and community agencies for children and their families have begun (Carnegie Task Force on Learning in the Primary Grades, 1996; Carnegie Task Force on Meeting the Needs of Young Children, 1994).

While the reform and restructuring movement has continued to progress toward achieving greater inclusiveness in schools and educational equity for all children, U.S. schools continue to struggle. Grossman and Grossman (1994), who are concerned with gender inequity, view educational inequity as a problem within the

larger societal context. These authors contend that a disparity still exists between America's lofty ideals and its efforts to live up to them. Therefore, schools continue to transmit values and attitudes that reflect the inequity extant in American society today. Without education reform, teachers risk unconsciously maintaining the stratification of society and reproducing inequities regarding gender, race, social class, and ability (Grossman & Grossman, 1994).

The restructuring effort of merging special education with the general education system was first proposed by Susan Stainback and William Stainback in 1984. To help meet this goal, the U.S. Office of Special Education and Rehabilitation Services in the U.S. Department of Education issued the Regular Education Initiative (REI) in 1986. This move toward inclusive schools was later endorsed by the Association for Supervision and Curriculum Development (ASCD) and the National Association of State Boards of Education (NASBE) (National Association of State Boards of Education Study Group on Special Education, 1992; Stainback & Stainback, 1995). The Goals 2000 and Improving America's Schools Act of 1993 have given legislative support to the notion of using inclusive approaches to boost educational outcomes for all children, including those with disabilities or special learning needs (Baker, Wang, & Walberg, 1994/1995). Leaders in the field of special education also are calling for an education system that provides comprehensive services that effectively meet the individual needs of all children, thus eliminating segregation and labeling of children with disabilities (Deiner, 1993). At the other end of the ability spectrum, the Goals 2000 summit also focused attention on boosting the performance of high-achieving students (U.S. Department of Education, 1993).

Categorical programs result in marginalization of children and segmentation of services. Such a categorical approach to education is known to affect a disproportionate number of children who are poor or who are members of racial and ethnic minorities. Overidentification and segregation into categorical special programs for children who are at risk or disabled can underscore feelings of alienation (Wang, Reynolds, & Walberg, 1994/1995). It is now recognized that any program that isolates children because of a difference, even those for children who are gifted, may result in children being stigmatized (Sapon-Shevin, 1994/1995).

The movement for inclusive education has become aligned with education reform and restructuring initiatives. Renzulli (1994), for example, responded to calls for reform by reconfigurating his Schoolwide Enrichment Model. His intent is to improve the quality of education offered in schools as a whole, rather than focusing solely on improving the kinds of opportunities available for children who are gifted. Leaders across various fields of education and different echelons of society are envisioning an education system that is truly inclusive; they hope for a society that will provide support for the growth and development of diverse groups of children (Carnegie Task Force on Learning in the Primary Grades, 1996).

ADVOCACY FOR INCLUSION

Major professional organizations for child advocacy, care, and education have voiced their support for providing more inclusive education for all

children, including those with special learning needs. These international and national associations and coalitions have begun providing guidance through the issuance of position papers, support of research, and the development of guidelines.

The National Coalition of Advocates for Students (NCAS) is a nonprofit network of 22 child advocacy organizations. The civil rights movement of the 1960s spawned this coalition, whose mission is to ensure all children access to a quality education. For over 30 years, NCAS has worked toward improving the education of children who are most vulnerable and at-risk for school failure, focusing on the poor, recent immigrants, the disabled, and those from racial, ethnic, or linguistic minorities. Through research and advocacy projects, NCAS endeavors to change school policies and practices. In 1991, NCAS published a list of 10 entitlements of all school children, emphasizing the right to learn in a setting that is integrated, heterogeneous, and responsive to individual differences (National Coalition of Advocates for Students, 1991).

Teachers of English to Speakers of Other Languages, Inc. (TESOL) is an international professional organization that promotes effective teaching of English, while preserving the language rights of individuals. This organization advocates a focus on both the strengths of children and on their right to be included in the mainstream. In 1992, TESOL adopted a set of standards and issued a statement that strongly endorses the right of children in linguistically and culturally diverse communities to have opportunities to interact with their peers and participate in an integrated "total school program." Furthermore, TESOL proclaims the right of children to have teachers who recognize their language proficiency and respect their home language and culture. TESOL maintains that children have a right to teachers who are professionally prepared to teach in integrated multilingual situations (Teachers of English to Speakers of Other Languages, Inc., 1995a, 1995b).

The inclusion of children with disabilities in early childhood settings caused professionals in traditional early childhood education (ECE) and early childhood special education (ECSE) to analyze the merits of two sets of practices that had evolved along different paths. The Developmentally Appropriate Practice (DAP) guidelines provided by the National Association for the Education of Young Children (NAEYC) (Bredekamp, 1987; Bredekamp & Copple, 1997) have been embraced widely by general early childhood teachers. The first publication of these guidelines initiated comparisons between the practices recommended in ECE and ECSE (Safford, 1989), and debates began to center on whether DAP was sufficient to guide practice in early childhood inclusion settings (Carta, Atwater, Schwartz, & McConnell, 1993; Carta, Schwartz, Atwater, & McConnell, 1991; Johnson & Johnson, 1992; Johnson & Johnson, 1993; McLean & Odom, 1993; Wolery, Strain, & Bailey, 1992).

In 1993, a number of major efforts focused on clarifying stances and positions in both fields. The Division for Early Childhood of the Council for Exceptional Children (CEC) published a set of recommended practices for teachers in the field of early childhood special education (Division for Early Childhood of the Council for Exceptional Children, 1993a). The Association for Childhood Education International (ACEI) published a position paper detailing concerns for infants and toddlers with special needs and their families, and addressing the issues of personnel preparation,

access to services, and the assurance of quality in the early intervention of young children (Sexton, Snyder, Sharpton, & Stricklin, 1993). A position paper articulating the Division for Early Childhood of the Council for Exceptional Children (DEC/CEC) stance on inclusion also was adopted in 1993. Valuing diversity, providing services in natural early childhood settings, and family participation in determining services are among the major premises of this document. DEC/CEC calls for restructuring of education and other social services to be more responsive to children with special needs and their families. The paper also encourages professional collaboration to support inclusion, and it promotes research to guide the provision of services (Division for Early Childhood of the Council for Exceptional Children, 1993b).

Also in 1993, the Division for Early Childhood of the Council for Exceptional Children (DEC/CEC) adopted a position paper encouraging the early identification of children with special needs, as well as the provision of early intervention services for these children. The document calls for the provision of services that respond to the needs of children within the cultural contexts of their community. This paper recognizes that children with special needs and their families represent a full range of diversity, which is defined broadly as variations in ethnicity, economics, culture, and ability (Division for Early Childhood of the Council for Exceptional Children, 1993c).

As inclusion in early childhood settings became more widespread, debates between professionals in the fields of traditional early childhood education and early childhood special education began to center on moves toward convergence and synthesis (Bredekamp, 1993; Carta, 1994; Cavallaro, Haney, & Cabello, 1993; Fox, Hanline, Vail, & Galant, 1994; Johnson & Johnson, 1994; Wolery & Bredekamp, 1994). Dialogues of this kind have resulted in consensus-building efforts toward merging these separate fields. In 1994, the National Association for the Education of Young Children (NAEYC) endorsed the stance on inclusion articulated by Division for Early Childhood of the Council for Exceptional Children (DEC/CEC) (Division for Early Childhood of the Council for Exceptional Children, 1993b).

A notable occurrence in the movement to include young children with disabilities in early childhood settings was the 1995 publication of a document developed and issued conjointly by three major organizations: The Division for Early Childhood of the Council for Exceptional Children (DEC/CEC), the National Association for the Education of Young Children (NAEYC), and the Association of Teacher Educators (ATE). The document, *Personnel Standards for Early Education and Early Intervention: Guidelines for Licensure in Early Childhood Special Education*, represents a significant move toward greater consensus regarding inclusion. The guidelines articulate a unified stance for defining roles for personnel, and for defining appropriate practices for inclusive early childhood education (Division for Early Childhood of the Council for Exceptional Children, National Association for the Education of Young Children, & Association of Teacher Educators, 1995). In addition, these guidelines address the need for professionals to become culturally competent in order to more effectively serve culturally diverse populations of children and their families. This document was incorporated into NAEYC's 1995 position statement, *Guidelines for Preparation of Early Childhood Professionals*, and into a subsequent position state-

ment of the same title, issued in 1996. The new guidelines also include *Standards for Early Childhood Generalist Certification,* which was prepared by the National Board for Professional Teaching Standards (NBPTS) (National Association for the Education of Young Children [NAEYC], 1995, 1996a).

In response to the growing cultural and linguistic diversity of young children, the National Association for the Education of Young Children adopted a position statement in November 1995. This statement included professional recommendations for providing effective early childhood education programs that respond to culturally and linguistically diverse groups of children and their families (NAEYC, 1996b). NAEYC also published a revision of its earlier guidelines (Bredekamp, 1987), in an effort to better define "developmentally appropriate practice" within the context of greater diversity among young children (Bredekamp & Copple, 1997).

THE CHALLENGE FOR EARLY CHILDHOOD EDUCATION

In early childhood education, the challenge is to move beyond a philosophical commitment toward inclusion and toward the implementation of program models that effectively carry out that commitment. The majority of program models for early childhood have been designed for youngsters with typical development, from middle-income families, and of majority group status. Redesigning and implementing early childhood programs to be consistent with the broader concept of inclusion presented in this book is critical if we are to help today's children succeed. The traditional theoretical paradigms undergirding early childhood education must expand to account for not only children with typical development, but also those with atypical patterns of development. The relevance of paradigms developed from European, Westernized roots and based on child development research that underrepresented children of color must be evaluated (New, 1994; Trawick-Smith, 1997).

Early childhood is a critical time for implementing inclusive education programs. The impact of early experiences and learning opportunities on the development of young children is virtually indisputable. Using new brain imaging technologies, scientists have recently advanced our understanding of how the brain develops and functions. Neurological research indicates that the nurture aspects (meaning children's experiences) interact with the nature or biological components to affect the development of the brain. This interactive process determines the capacities of the brain for memory, deciphering language, and other lifelong skills. The neural plasticity or adaptability of the brain during the early years means the quality of children's experiences are a critical influence on their brain development (Leister-Willis, 1997; Newberger, 1997; Sylwester, 1993/1994). Accumulated evidence continues to underscore the significance of the early childhood period for helping children reach their highest potential (Carnegie Task Force on Learning in the Primary Grades, 1996).

The early childhood years are also a critical time in children's social development, which can have a major effect on their attitudes and interpersonal skills. By 18 months, young children show an awareness of "gender-appropriate" activities and

materials. By age 5, the understanding of activities and occupations typically associated with each gender is well established (Berk, 1994). Research indicates that children begin to notice their physical differences around two years of age and form prejudices as early as 18 months (Derman-Sparks & ABC Task Force, 1989). A prime opportunity exists for helping children to accept diversity when their characteristics, in a group setting, vary widely (Dean, Salend, & Taylor, 1993; Derman-Sparks, 1993/1994). Therefore, one key to success for diverse groups of children may lie in the attitudes and practices of their teachers. Conveying beliefs and attitudes toward acceptance is critical. Teachers can greatly increase the chances for all children to succeed by being more responsive to the diversity of children in their classrooms (Banks, 1993a; Derman-Sparks & ABC Task Force, 1989; Garcia, 1993; Gersten & Woodward, 1994).

Early childhood professionals must integrate the practices of various fields and carefully match their approaches and strategies to the unique characteristics of individual children (Carta, 1994; Salisbury et al., 1994). Despite a lack of consensus among professionals as to pedagogy, and the absence of an accumulated research base establishing the validity of practices, classroom teachers have begun implementing inclusive education programs in general early childhood settings. While good intentions and compliance with the law have precipitated the implementation of early childhood inclusion programs, the need to accumulate a viable body of research to guide those efforts is urgent.

Past studies have tended to focus primarily on the social integration of children with disabilities and their nondisabled peers in typical education settings (Antia & Kreimeyer, 1992; Antia, Kreimeyer, & Eldredge, 1993; Buysse, 1993; Guralnick, 1993; Hamre-Nietupski, Hendrickson, Nietupski, & Sasso, 1993; Peterson & McConnell, 1993). However, inclusion in early childhood is not solely a social experiment. The overall development of children, including cognitive aspects, must be supported. Therefore, teachers need studies that identify inclusive approaches and strategies to use for enhancing all domains of development. Validation of identified strategies and practices through rigorous empirical research must follow if the inclusive education movement is to have the positive impact intended by its supporters (Fisher, Schumaker, & Deshler, 1995).

Implementing inclusion in early childhood settings means redefining the roles of early childhood professionals, and changing preparation programs to address these new definitions. Teachers must learn to use a wider range of instructional strategies to enhance the developmental learning of young children in diverse groups (Joint Committee on Teacher Planning for Students With Disabilities, 1995). Collaborating across a network of professionals in various fields will require preparation of early childhood teachers with a variety of cooperative, social, and communication skills (Falvey et al., 1995; Fuchs, Fuchs, Hamlett, Phillips, & Karns, 1995). Teachers also must apply these collaborative skills to build productive relationships with families and the community (Darling-Hammond, 1996; Odom, McLean, Johnson, & LaMontagne, 1995). Finally, all early childhood professionals must maintain current knowledge of the law regarding disabilities, racial and ethnic minorities, gender

equity, and other issues. Understanding the array of legal mandates that affect the design and implementation of inclusion in early childhood programs is critical to advancing the inclusive education movement in early childhood education.

The early childhood profession is in a good position to assume a major leadership role in shaping the future directions of the inclusion movement. While work toward the goal of blending the fields of early childhood education and early childhood special education has already begun, much remains to be done if viable reform is expected. Work must continue toward the development of program models for inclusive education in early childhood. These program models must be implemented and evaluated in various early childhood settings. Moreover, it is critical that models be evaluated through rigorous research efforts.

The fields of traditional early childhood and early childhood special education have initiated efforts to move toward a unified theoretical and pedagogical stance for inclusion in early childhood education. These efforts must be intensified and similar mergers with other fields of education must be initiated. The convergence of thoughts and ideas that has begun to occur has the potential to bring greater strength and vitality to early childhood education and the inclusive education movement.

CONCLUSION

Social forces and legal mandates in the United States have precipitated broad, societal changes. In education, there has been a paradigm shift from segregated, remedial approaches for dealing with children's differences to more inclusive, constructivist approaches that focus on the ability and strengths of children. Consequently, the concept of "inclusion" presented in this book encompasses children representing a full range of diversity—ethnic, cultural, linguistic, gender, and ability.

The remaining chapters of this book provide detailed information describing a research-based model for designing inclusive programs in early childhood. Readers will explore ways to implement programs, developed using the ECI Model, to create challenging learning opportunities for diverse groups of children in early childhood settings.

REFERENCES

American Association of University Women. (1991). *Shortchanging girls, shortchanging America: A call to action.* Washington, DC: Author.

American Broadcasting Corporation. (1996). *Good Morning America.* ABC News.

Antia, S. D., & Kreimeyer, K. (1992). Project interact: Interventions for social integration of young hearing-impaired children. *OSERS News in Print, ED 348-806,* 14-20.

Antia, S. D., Kreimeyer, K., & Eldredge, N. (1993). Promoting social interaction between young children with hearing impairments and their peers. *Exceptional Children, 60*(3), 262-275.

Baer, J. (1993/94). Why you shouldn't trust creativity tests. *Educational Leadership, 51*(4), 80-83.

Bailey, D. B., & Wolery, M. (1992). *Teaching infants and preschoolers with disabilities* (2nd ed.). New York: Merrill/Macmillan Publishing Co.

Baker, E. T., Wang, M. C., & Walberg, H. J. (1994/1995). The effects of inclusion on learning. *Educational Leadership, 52*(4), 33-35.

Banks, J. (1993a). Multicultural education for young children: Racial and ethnic attitudes and their modification. In B. Spodek (Ed.), *Handbook of research on the education of young children* (pp. 236-250). New York: Macmillan.

Banks, J. A. (1993b). Multicultural education: Development, dimensions, and challenges. *Phi Delta Kappan, 75*(1), 22-28.

Barbour, N. B. (1992). Early childhood gifted education: A collaborative perspective. *Journal for the Education of the Gifted, 15*(2), 145-162.

Berk, L. E. (1994). *Child development* (3rd ed.). Needham Heights, MA: Allyn and Bacon.

Berman, P., Minicucci, C., McLaughlin, B., Nelson, B., & Woodworth, K. (1995). *School reform and student diversity: Case studies of exemplary practices for LEP students.* Santa Cruz, CA: The Institute for Policy Analysis and Research. In

BEST COPY AVAILABLE

collaboration with the National Center for Research on Cultural Diversity and Second Language Learning (Washington, DC).

Boundy, K. B. (1992). *Promoting inclusion for all students with disabilities.* Cambridge, MA: Center for Law and Education.

Boyer, E. L. (1991). *Ready to learn: A mandate for the nation.* Princeton, NJ: The Carnegie Foundation for the Advancement of Teaching.

Bredekamp, S. (Ed.). (1987). *Developmentally appropriate practice in early childhood programs serving children from birth through age 8.* Washington, DC: National Association for the Education of Young Children.

Bredekamp, S. (1993). The relationship between early childhood education and early education special education: Healthy marriage or family feud? *Topics in Early Childhood Special Education, 13*(3), 258-273.

Bredekamp, S., & Copple, C. (Eds.). (1997). *Developmentally appropriate practice in early childhood programs* (Rev. ed.). Washington, DC: National Association for the Education of Young Children.

Brown v. Board of Education of Topeka, Supreme Court of the United States, 1954. 347 U.S. 483, 74 S. Ct. 686.

Buysse, V. (1993). Friendships of preschoolers with disabilities in community based child care settings. *Journal of Early Intervention, 17*(4), 380-395.

Carnegie Task Force on Learning in the Primary Grades. (1996). *Years of promise: A comprehensive learning strategy for America's children.* New York: Carnegie Corporation of New York.

Carnegie Task Force on Meeting the Needs of Young Children. (1994). *Starting points: Meeting the needs of our youngest children.* New York: Carnegie Corporation of New York.

Carta, J., Atwater, J., Schwartz, I., & McConnell, S. (1993). Developmentally appropriate practices and early childhood special education: A reaction to Johnson and McChesney Johnson. *Topics in Early Childhood Special Education, 13*(3), 243-354.

Carta, J., Schwartz, I., Atwater, J., & McConnell, S. (1991). Developmentally appropriate practice: Appraising its usefulness for young children with disabilities. *Topics in Early Childhood Special Education, 11*(1), 1-20.

Carta, J. J. (1994). Developmentally appropriate practices: Shifting the emphasis to individual appropriateness. *Journal of Early Intervention, 18*(4), 342-343.

Cavallaro, C. C., Haney, M., & Cabello, B. (1993). Developmentally appropriate strategies for promoting full participation in early childhood settings. *Topics in Early Childhood Special Education, 13*(3), 293-307.

Centers for Disease Control and Prevention. (1992). *HIV/AIDS surveillance.* Atlanta, GA: U.S. Department of Health and Human Services, Public Health Service.

Chamot, A. U., & O'Malley, J. M. (1994). *The CALLA handbook: Implementing the cognitive academic language learning approach.* Menlo Park, CA: Addison Wesley.

Children's Defense Fund. (1995). *The state of America's children: Yearbook 1995.* Washington, DC: Author.

Children's Defense Fund. (1997). *The state of America's children: Yearbook 1997.* Washington, DC: Author.

Christensen, K. M. (1993). A multicultural approach to education of children who are deaf. In K. M. Christensen & G. L. Delgado (Eds.), *Multicultural issues in deafness* (pp. 17-28). White Plains, NY: Longman.

Cicchelli, T., & Ashby-Davis, C. (1986). *Teaching exceptional children and youth in the regular classroom.* Syracuse, NY: Syracuse University Press.

Clark, B. (1992). *Growing up gifted: Developing the potential of children at home and at school* (4th ed.). Englewood Cliffs, NJ: Merrill/Prentice Hall.

Crawford, J. (1991). *Bilingual education: History, politics, theory, and practice* (2nd ed.). Los Angeles: Bilingual Educational Services, Inc.

Cummins, J. (1993). Empowerment through biliteracy. In J. V. Tinajero & A. F. Ada (Eds.), *The power of two languages: Literacy and biliteracy for Spanish-speaking students* (pp. 9-25). New York: Macmillan/McGraw-Hill School Publishing.

Darling-Hammond, L. (1996). The right to learn and the advancement of teaching: Research, policy, and practice for democratic education. *Educational Researcher, 25*(6), 5-17.

Davis, G. A., & Rimm, S. B. (1994). *Education of the gifted and talented* (3rd ed.). Boston: Allyn and Bacon.

Dean, A. V., Salend, S. J., & Taylor, L. (1993). Multicultural education: A challenge for special educators. *Teaching Exceptional Children, 26*(1), 40-43.

Deiner, P. (1993). *Resources for teaching children with diverse abilities* (2nd ed.). Fort Worth, TX: Harcourt Brace College Publishers.

Derman-Sparks, L. (1993/1994). Empowering children to create a caring culture in a world of differences. *Childhood Education, 70*(2), 66-71.

Derman-Sparks, L., & ABC Task Force. (1989). *Anti-bias curriculum: Tools for empowering young children.* Washington, DC: National Association for the Education of Young Children.

Division for Early Childhood of the Council for Exceptional Children. (1993a). *DEC recommended practices: Indicators of quality in programs for infants and young children with special needs and their families.* Reston, VA: Author.

Division for Early Childhood of the Council for Exceptional Children. (1993b). *Position on inclusion.* Pittsburgh, PA: Author.

Division for Early Childhood of the Council for Exceptional Children. (1993c). *DEC position on early intervention services for children birth to age eight.* Pittsburgh, PA: Author.

Division for Early Childhood of the Council for Exceptional Children, National Association for the Education of Young Children, & Association of Teacher Educators. (1995). *Personnel standards for early education and early intervention: Guidelines for licensure in early childhood special education.* Pittsburgh, PA: Division for Early Childhood Council for Exceptional Children.

Duttweiler, P. C. (1992). Engaging at-risk students with technology. *Media & Methods, 12,* 6-8.

Edelman, M. W. (1994). Introduction. In A. Sherman, *Wasting America's future: The Children's Defense Fund report on the costs of child poverty* (pp. xiii-xxix). Washington, DC: Children's Defense Fund.

Fagot, B. I. (1985). Beyond the reinforcement principle: Another step toward understanding sex roles. *Developmental Psychology, 21,* 1097-1004.

Falvey, M. A., Givner, C. C., & Kimm, C. (1995). What is an inclusive school? In R. A. Villa & J. S. Thousand (Eds.), *Creating an inclusive school* (pp. 1-12). Alexandria, VA: Association for Supervision and Curriculum Development.

BEST COPY AVAILABLE

Fein, G., Johnson, D., Kosson, N., Stork, L., & Wasserman, L. (1975). Sex stereotypes and preferences in the toy choices of 20-month-old boys and girls. *Developmental Psychology, 11*(4), 527-528.
Ferguson, L. (1986). A fair share: Opening doors for the gifted bilingual student. *Equity and Choice, 2*(3), 5-13.
Fern, V. (1995). Oyster school stands the test of time. *Bilingual Research Journal, 19*(3 & 4), 497-512.
Fisher, J. B., Schumaker, J. B., & Deshler, D. D. (1995). Searching for validated inclusive practices: A review of the literature. *Focus on Exceptional Children, 28*(4), 1-20.
Fox, L., Hanline, M. F., Vail, C. O., & Galant, K. R. (1994). Developmentally appropriate practice: Applications for young children with disabilities. *Journal of Early Intervention, 18*(3), 243-257.
Freeman, Y., & Freeman, D. (1992). *Whole language for second language learners.* Portsmouth, NH: Heinemann Educational Books, Inc.
Frost, J. L. (1992). *Play and playscapes.* Albany, NY: Delmar.
Fuchs, L., Fuchs, D., Hamlett, C., Phillips, N., & Karns, K. (1995). General educator's specialized adaption for students with learning disabilities. *Exceptional Children, 61*(5), 440-459.
Garcia, E. (1993). The education of linguistically and culturally diverse children. In B. Spodek (Ed.), *Handbook of research on the education of young children* (pp. 372-384). New York: Macmillan.
Gardner, H. (1983). *Frames of mind: The theory of multiple intelligences.* New York: Basic Books.
Gersten, R., & Woodward, J. (1994). The language-minority student and special education: Issues, trends, and paradoxes. *Exceptional Children, 60*(4), 310-322.
Gersten, R., & Woodward, J. (1995). A longitudinal study of transitional and immersion bilingual education programs in one district. *Elementary School Journal, 95*, 223-240.
Goodman, D., & Curry, T. K. (1991). Teaching in the real world. In Y. M. Goodman, W. J. Hood, & K. S. Goodman (Eds.), *Organizing for whole language* (pp. 137-169). Portsmouth, NH: Heinemann Educational Books.
Greer v. Rome City School District, 950 F. 2d at 696.
Grossman, H., & Grossman, S. H. (1994). *Gender issues in education.* Boston: Allyn and Bacon.
Guilford, J. P. (1967). *The nature of human intelligence.* New York: McGraw-Hill.
Guilford, J. P. (1982). Cognitive psychology's ambiguities: Some suggested remedies. *Psychological Review, 89*, 48-59.
Guralnick, M. J. (1993). Developmentally appropriate practice in the assessment and intervention of children's peer relations. *Topics in Early Childhood Special Education, 13*(3), 344-371.
Hamre-Nietupski, S., Hendrickson, J., Nietupski, J., & Sasso, G. (1993). Perceptions of teachers of students with moderate, severe, or profound disabilities on facilitating friendships with nondisabled peers. *Education and Training in Mental Retardation, 28*(2), 111-127.
Hardman, M. L., Drew, C. J., & Egan, M. W. (1996). *Human exceptionality: Society, school, and family* (5th ed.). Boston: Allyn and Bacon.
Harry, B. (1992). *Cultural diversity, families, and the special education system.* New York: Teachers College Press.
Heward, W. L. (1996). *Exceptional children: An introduction to special education* (5th ed.). Upper Saddle River, NJ: Merrill/ Prentice Hall.
Holland v. Sacramento City School District, 786 F. Supp. 874 (E.D. Cal. 1992).
Hollinger, C. L., & Fleming, E. S. (1988). Gifted and talented young women: Antecedents and correlates of life satisfaction. *Gifted Child Quarterly, 32*(2), 254-259.
Humphries, T. (1993). Deaf culture and cultures. In K. M. Christensen & G. Delgado (Eds.), *Multicultural issues in deafness* (pp. 3-16). White Plains, NY: Longman.
Iran-Nejad, A., & Marsh, G. E., II. (1994). Discovering the future of education. *Education, 114*(2), 249-256.
Johnson, J. E., & Johnson, K. M. (1992). Clarifying the developmental perspective in response to Carta, Schwartz, Atwater, and McConnell. *Topics in Early Childhood Special Education, 12*(4), 439-457.
Johnson, J. E., & Johnson, K. M. (1994). The applicability of developmentally appropriate practice for children with diverse abilities. *Journal of Early Intervention, 18*(4), 343-346.
Johnson, K. M., & Johnson, J. E. (1993). Rejoinder to Carta, Atwater, Schwartz, and McConnell. *Topics in Early Childhood Special Education, 13*(3), 255-257.
Joint Committee on Teacher Planning for Students with Disabilities. (1995). *Planning for academic diversity in America's classrooms: Windows on reality, research, change, and practice.* Lawrence, KS: The University of Kansas Center for Research on Learning.
Kearsley, R. B., & Zelazo, P. R. (1979). Sex typed differences in the spontaneous play behavior in infants 9 1/2 to 15 1/2 months of age. *ERIC Document Reproduction Services, ED 168-699.*
Koplow, L. (1996). Preface. In L. Koplow (Ed.), *Unsmiling faces: How preschools can heal* (pp. ix-xi). New York: Teachers College Press.
Lau v. Nichols, 414 U.S. 563, 94S. Ct. 786 (1974).
Leister-Willis, C. (1997). The White House conference on brain development. *Dimensions of Early Childhood, 25*(2), special insert.
LeRoy, C., Powell, T., & Kelker, P. (1994). Meeting our responsibilities in special education. *Teaching Exceptional Children, 26*(4), 37-44.
Maccoby, E. E., & Jacklin, C. N. (1974). *The psychology of sex differences.* Stanford, CA: Stanford University Press.
Maker, C., Nielson, A., & Rogers, J. (1994). Giftedness, diversity, and problem-solving. *Teaching Exceptional Children, 27*(1), 4-18.
Maker, C. J. (1977). *Providing programs for gifted handicapped.* Reston, VA: Council for Exceptional Children.
Mallory, B. L. (1994). Inclusive policy, practice, and theory for young children with developmental differences. In B. L. Mallory & R. S. New (Eds.), *Diversity and developmentally appropriate practices: Challenges for early childhood education* (pp. 44-61). New York: Teachers College Press.
May, D. C., & Kundert, D. K. (1997). School readiness practices and children at-risk: Examining the issue. *Psychology in Schools, 34*(2), 73-83.

BEST COPY AVAILABLE

McCormick, T. M. (1994). *Creating the nonsexist classroom: A multicultural approach.* New York: Teachers College Press.
McKeon, D. (1994). When meeting "common" standards is uncommonly difficult. *Educational Leadership, 51*(8), 45-49.
McLean, M. E., & Odom, S. L. (1993). Practices for young children with and without disabilities: A comparison of DEC and NAEYC identified practices. *Topics in Early Childhood Education, 13*(3), 274-292.
Mills v. Board of Education, 348 F. Supp. 866 (D.D.C. 1972).
National Association for the Education of Young Children. (1995). *Guidelines for preparation of early childhood professionals.* Washington, DC: Author.
National Association for the Education of Young Children. (1996a). *Guidelines for preparation of early childhood professionals.* Washington, DC: Author.
National Association for the Education of Young Children. (1996b). NAEYC position statement: Responding to linguistic and cultural diversity—Recommendations for effective early childhood education. *Young Children, 51*(2), 4-12.
National Association of State Boards of Education Study Group on Special Education. (1992). *Winners all: A call for inclusive schools.* Alexandria, VA: National Association of State Boards of Education.
National Coalition of Advocates for Students. (1991). *The good common school: Making the vision work for all children.* Boston, MA: Author.
New, R. S. (1994). Culture, child development, and developmentally appropriate practices: Teachers as collaborative researchers. In B. L. Mallory & R. S. New (Eds.), *Diversity and developmentally appropriate practices: Challenges for early childhood education* (pp. 65-83). New York: Teachers College Press.
New, R. S., & Mallory, B. L. (1994). Introduction: The ethic of inclusion. In B. L. Mallory & R. S. New (Eds.), *Diversity and developmentally appropriate practices: Challenges for early childhood education* (pp. 1-13). New York: Teachers College Press.
Newberger, J. J. (1997). New brain development research—A wonderful window of opportunity to build public support for early childhood education! *Young Children, 52*(4), 4-9.
Nieto, S. (1993). We speak in many tongues: Language diversity and multicultural education. In J. V. Tinajero & A. F. Ada (Eds.), *The power of two languages: Literacy and biliteracy for Spanish-speaking students* (pp. 37-48). New York: Macmillan/McGraw-Hill School Publishing.
Nunez, R. (1994). *Hopes, dreams & promise: The future of homeless children in America.* New York: Institute for Children and Poverty Homes for the Homeless.
Nunez, R. (1996). *The new poverty: Homeless families in America.* New York: Insight Books/Plenum Press.
Oberti v. Board of Ed. of Clementon, NJ, C.A. No. 91-2818, D.N.J. 8/17/92.
Odom, S., McLean, M., Johnson, L., & LaMontagne, M. (1995). Recommended practices in early childhood special education: Validation and current use. *Journal of Early Intervention, 19*(1), 1-17.
Olsen, L. (1994). *The unfinished journey: Restructuring schools in a diverse society.* San Francisco: California Tomorrow.
Pallas, A., Natriello, G., & McDill, E. (1989). The changing nature of the disadvantaged population: Current dimensions and future trends. *Educational Researcher, 18*, 16-22.
Pennsylvania Association for Retarded Citizens v. Pennsylvania, 334 F. Supp. 1257 (E.D. Pa. 1971).
Perrett, R. (1988). *Girls and boys.* Watson, Australia: Australian Early Childhood Association.
Peterson, C. A., & McConnell, S. R. (1993). Factors affecting the impact of social interaction skills interventions in early childhood special education. *Topics in Early Childhood Special Education, 13*(1), 38-56.
Rapport, M. J. K. (1996). Legal guidelines for the delivery of special health care services in schools. *Exceptional Children, 62*(6), 537-549.
Renzulli, J. S. (1978). What makes giftedness? Reexamining a definition. *Phi Delta Kappan, 61*, 180-184.
Renzulli, J. S. (1994). New directions for the schoolwide enrichment model. *Gifted Education International, 10*(1), 33-36.
Renzulli, J. S. (1994/1995). Teachers as talent scouts. *Educational Leadership, 52*(4), 75-81.
Rogers, J. (1993). *The inclusion revolution* (Research Bulletin 11). Bloomington, IN: Center for Evaluation, Development, and Research, Phi Delta Kappa.
Rothstein, L. F. (1990). *Special education law.* White Plains, NY: Longman.
Sadker, M., & Sadker, D. (1994). *Failing at fairness: How America's schools cheat girls.* New York: Charles Scribner's Sons.
Safford, P. L. (1989). *Integrated teaching in early childhood: Starting in the mainstream.* White Plains, NY: Longman.
Salisbury, C., Mangino, M., Petrigala, M., Rainforth, B., Syryca, S., & Palombaro, M. (1994). Innovative practices: Promoting the instructional inclusion of young children with disabilities in the primary grades. *Journal of Early Intervention, 18*(3), 311-322.
Sapon-Shevin, M. (1994/1995). Why gifted students belong in inclusive schools. *Educational Leadership, 52*(4), 64-70.
Seefeldt, C., & Barbour, N. (1994). *Early childhood education: An introduction* (3rd ed.). New York: Merrill/Macmillan College Publishing Co.
Sexton, D., Snyder, P., Sharpton, W. R., & Stricklin, S. (1993). Infants and toddlers with special needs and their families. *Childhood Education, 69*(5), 278-286.
Sherman, A. (1994). *Wasting America's future: The Children's Defense Fund report on the costs of child poverty.* Washington, DC: Children's Defense Fund.
Slavin, R. E. (1994). Preventing early school failure: The challenge and the opportunity. In R. E. Slavin, N. L. Karweit, & B. A. Wasik (Eds.), *Preventing early school failure: Research, policy and practice* (pp. 1-12). Needham Heights, MA: Allyn and Bacon.
Solow, R. M. (1994). Foreword. In A. Sherman, *Wasting America's future: The Children's Defense Fund report on the costs of child poverty* (pp. vii-ix). Washington, DC: Children's Defense Fund.
Stainback, W., & Stainback, S. (1995). Contemplating inclusive education from a historical perspective. In R. A. Villa & J. S. Thousand (Eds.), *Creating an inclusive school* (pp. 16-27). Alexandria, VA: Association for Supervision and Curriculum Development.
Sternberg, R. (1985). *Beyond IQ: A triarchic theory of human intelligence.* New York: Cambridge University Press.
Sternberg, R. J. (1996). Myths, countermyths, and truths about intelligence. *Educational Researcher, 25*(2), 11-16.
Sylwester, R. (1993/1994). What the biology of the brain tells us about learning. *Educational Leadership, 51*(4), 46-51.

BEST COPY AVAILABLE

Tannenbaum, A. J. (1992). Early signs of giftedness: Research and commentary. In P. S. Klein & A. J. Tannenbaum (Eds.), *To be young and gifted* (pp. 3-32). Norwood, NJ: Ablex.
Teachers of English to Speakers of Other Languages, Inc. (1995a). TESOL standards ensuring access to quality educational experiences for language minority students. *Bilingual Research Journal, 19*(3 & 4), 671-674.
Teachers of English to Speakers of Other Languages, Inc. (1995b). TESOL statement on the role of bilingual education in the education of children in the United States. *Bilingual Research Journal, 19*(3 &4), 661-669.
Terman, L. (Ed.). (1925). *Mental and physical traits of a thousand gifted children* (Vol. 1). Stanford, CA: Stanford University Press.
Torrance, E. P. (1966). *The Torrance tests of creative thinking: Norms-technical manual.* Lexington, MA: Personal Press.
Torrance, E. P. (1990). *The Torrance tests of creative thinking: Norms-technical manual.* Bensenville, IL: Scholastic Testing Service.
Trawick-Smith, J. W. (1997). *Early childhood development: A multicultural perspective.* Upper Saddle River, NJ: Merrill/Prentice Hall.
Turnbull, H. R., III. (1993). *Free appropriate public education: The law and children with disabilities* (4th ed.). Denver, CO: Love Publishing Co.
U.S. Bureau of the Census. (1990). *How we're changing—demographic state of the nation.* Washington, DC: Author.
U.S. Department of Education. (1993). *National excellence: A case for developing America's talent.* Washington, DC: Author.
U.S. Department of Education. (1994). *Sixteenth annual report to Congress on the implementation of the Individuals With Disabilities Education Act.* Washington, DC: Author.
U.S. Department of Education Office of Special Programs. (1993). *Fifteenth annual report to Congress on the implementation of the Individuals With Disabilities Education Act.* Washington, DC: Author.
Underwood, J. K., & Mead, J. F. (1995). *Legal aspects of special education and pupil services.* Boston: Allyn and Bacon.
Villa, R. A., & Thousand, J. S. (1995). The rationales for creating inclusive schools. In R. A. Villa & J. S. Thousand (Eds.), *Creating an inclusive school* (pp. 28-44). Alexandria, VA: Association for Supervision and Curriculum Development.
Wang, M. C., Reynolds, M. C., & Walberg, H. J. (1994/1995). Serving students at the margins. *Educational Leadership, 52*(4), 12-16.
Whitehead, B. (1993). Dan Quayle was right. *The Atlantic Monthly, 271*(4), 47-84.
Whitmore, J. R., & Maker, C. J. (1985). *Intellectual giftedness in disabled persons.* Rockville, MD: Aspen.
Wink, J., Bender, C., Bravo, I., Putney, L., Reberg, R., & Whitehead, S. (1995). California: A picture of diverse language groups and ESL programs. *Bilingual Research Journal, 19*(3 &4), 641-659.
Winter, S. M. (1985). Toddler play behaviors and equipment choices in an outdoor play environment. In J. L. Frost & S. Sunderlin (Eds.), *When children play* (pp. 129-138). Olney, MD: Association for Childhood Education International.
Wolery, M., & Bredekamp, S. (1994). Developmentally appropriate practices and young children with disabilities: Contextual issues in the discussion. *Journal of Early Intervention, 18*(4), 331-341.
Wolery, M., Strain, P. S., & Bailey, D. B., Jr. (1992). Reaching potentials of children with special needs. In S. Bredekamp & T. Rosegrant (Eds.), *Reaching potentials: Appropriate curriculum and assessment for young children* (Vol. 1, pp. 92-111). Washington, DC: National Association for the Education of Young Children.
Working Committee on HIV Children and Families. (1996). *Families in crisis.* New York: Federation of Protestant Welfare Agencies.
Wortham, S. (1992). *Childhood 1892-1992.* Olney, MD: Association for Childhood Education International.

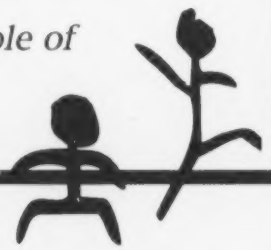
BEST COPY AVAILABLE

CHAPTER 2

Description of the ECI Model

KEY QUESTIONS

- *What are the primary concerns for early childhood to which the ECI Model responds?*
- *What are the 10 major characteristics of the ECI Model?*
- *Can you explain the 5 goals at the core of the ECI Model?*
- *What is the convergent theoretical foundation for the ECI Model?*
- *How is children's play viewed from the perspective of this model?*
- *Can you describe the role of teachers using this program model?*



THE RATIONALE

The ECI model provides a framework for designing programs, based on a new paradigm for early childhood and on the comprehensive definition of inclusion explained in Chapter 1. It addresses some of the major concerns and challenges faced by modern early childhood professionals

Aligning Reforms and Inclusion Efforts

The ECI Model represents an attempt to align reform and inclusion efforts, and to bring greater cohesiveness to early childhood programs for diverse groups of children. During the mid 1970s to early 1980s, many educators thought that the flexibility of early childhood programs would allow for "mainstreaming" children with disabilities into existing early childhood programs. Analyses revealed, however, that changes in the structure, organization, and practices of these programs were needed (Guralnick, 1983). This realization prompted scrutiny of both traditional early childhood education and early childhood special education. Efforts toward building greater consensus about programs, practices, and personnel preparation for early childhood inclusion resulted (see Chapter 1). The ECI Model is informed by these inclusion efforts, as well as others aimed at school reform.

The ECI Model recognizes the need for early childhood programs to address the increasing diversity of children, as well as the related need for changes in the methods, curricula, and organizational structures of programs serving children with various abilities, including those with disabilities. It is clear that children from linguistically and culturally diverse backgrounds, from low-income families, and with health-related problems are at a disadvantage unless learning opportunities are adapted to accommodate their needs (Wang, 1989). The reform movement is committed to the creation of high quality learning environments with instructional practices that are more consistent with accumulated research (Berman, Minicucci, McLaughlin, Nelson, & Woodworth, 1995; National Coalition of Advocates for Students [NCAS], 1994).

The ECI Model responds to calls for school reform and the federal mandates for children with disabilities.

In 1991, a national report (NCAS, 1991) revealed widespread use of traditional instructional methods that rely on large-group lectures and seatwork. Schools reportedly focused on imparting basic academic skills by using few materials, static environments, inflexible methods, and curricula that lack multicultural and interdisciplinary emphases. Major national reports continue to call for reforms to improve the quality of education and better meet the needs of individual children who are poor and at-risk (Children's Defense Fund, 1995, 1997), gifted and talented (U.S. Department of Education, 1993), female (American Association of University Women, 1991), and those with disabilities (Joint Committee on Teacher Planning for Students with Disabilities, 1995).

The ECI Model seeks to support and challenge learners from a full range of ability. Programs for children that employ undifferentiated teaching practices and fail to meet the individual needs of diverse learners are no longer feasible. "Teaching to the

middle" is an exclusionary practice that jeopardizes the fundamental right of some children to learn, and denies more able learners the opportunity for greater challenge and further development. Offering these children a greater number of options, such as enrichment activities, or opportunities to progress through the curriculum more rapidly or explore their areas of interest in greater depth, results in learning opportunities that are better matched to their ability (Cox, Daniels, & Boston, 1985; Hertzog, 1998). Teaching diverse learners in early childhood programs today is complex and requires departure from many traditional methods of teaching. Most certainly, teaching practices that reflect a "one-size-fits-all" mentality are not adequate.

The ECI Model seeks to provide support for success and challenge in learning for increasingly diverse groups of children.

The ECI Model endorses the use of technological tools and authentic contexts to promote learning. Proponents of school reform have urged more active involvement by students at all levels, using group activities, computers, multimedia, and community-based instruction. They have challenged educators to find more effective ways to motivate and teach increasingly diverse groups of children (Olsen, 1994). Recent Carnegie reports highlight the importance of aiming these reforms at the preschool years. Offering America's youngest children opportunities for high-quality learning experiences is vital if we are to increase their chances for success in kindergarten and the primary grades (Carnegie Task Force on Learning in the Primary Grades, 1996; Carnegie Task Force on Meeting the Needs of Young Children, 1994).

Comprehensive Program Planning

The ECI Model satisfies the need for a program model to guide comprehensive program development efforts. Controversy still surrounds the concept of "inclusion" and how to operationalize its goals in early childhood education programs. Furthermore, a thorough empirical research base to guide the design and implementation of inclusive education programs does not exist. Consequently, some inclusion programs for diverse groups of children have been initiated with little or no prior planning or staff development. While professional guidelines (see Chapter 1) are now available and could prove useful, many early childhood professionals appear unaware of these documents (Winter & Van Reusen, 1997).

To avoid a narrow focus and limited change that fail to touch the daily lives of children, the National Coalition of Advocates for Students (NCAS) calls for stronger cohesion between school-based reforms and inclusiveness. That is, new approaches to teaching that accommodate individual children must be sufficiently anchored to overall school restructuring efforts intended to promote greater inclusiveness. Furthermore, schools should be recognized as a community; as such, efforts to create a more inclusive learning environment must involve families, teachers, and administrators (NCAS, 1994). In line with the NCAS stance, schools should consider the overall picture of inclusion from the viewpoints of all stakeholders.

Careful attention to planning for inclusion at the program level is crucial. Developing inclusive education programs in an organized manner can help to ensure that all major components are addressed during processes of design or change. Additionally, the program planning process can be used to identify and involve the personnel needed to implement the program or effect the changes in existing programs. When these personnel are drawn into the program planning process, it may result in attitudinal changes that imbue greater unity and cohesiveness to faculty and staff (Smith, Edelen-Smith, & Stodden, 1995). The ECI Model provides a template to guide personnel through this process.

Planning for a "Good Fit"

The ECI Model allows for adjustment to fit the unique characteristics of children, families, and the community. Planners must compare the characteristics of the children they wish to serve with the demographics, culture, language, age, and other characteristics of participants in the model program. In addition to these considerations, other, more subtle, differences may affect implementation of program designs. Examining program planning as a process, Smith, Edelen-Smith, and Stodden (1995) warn that program models indicating success under one set of circumstances may not be as successful when replicated in another scenario. These authors cite evidence suggesting that during program development or restructuring, the process of change itself may influence results (Smith et al., 1995). While the ECI Model serves as a guide for program development, it affords the flexibility to create programs that match specific needs.

Accommodating Different Patterns of Development

The ECI Model promotes the accommodation of *all* children, whether they have typical, delayed, or atypical patterns of development and learning. In traditional early childhood education, professionals have moved away from the maturationist-based "readiness" paradigm, in which early childhood goals were viewed as preparation for more formal academics in elementary school. In early childhood special education, the philosophy always has been to provide active intervention, rather than to wait for further maturity and possible skill acquisition (Safford, 1989). Moreover, research does not support the efficacy of transitional programs or retention in the early grades (Buntaine & Kundert, 1997; Ferguson & Streib, 1996; Jimerson, Carlson, Rotert, Egeland, & Sroufe, 1997; Mantzicopoulos, 1997). With the growing diversity of children and the widespread acceptance of constructivist theory, goals for programs in early childhood have shifted toward supporting a child's continuous progress and development. Constructivist theory underscores the notion that the developmental learning of typical children is ongoing and progressive, building upon previous stages (Barbour & Seefeldt, 1993). However, children come to early childhood programs at various developmental stages in their learning process, and some children evidence variations in typical patterns of development (New & Mallory, 1994; Trawick-Smith, 1997).

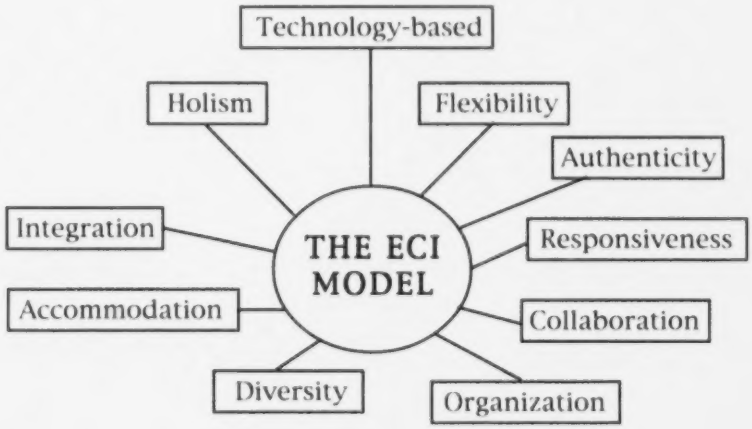
Therefore, rather than trying to help children become "ready" to fit the arbitrary criteria of existing early childhood programs, the ECI Model rests on the premise that

programs should change to fit the characteristics and needs of the children served (Shepard, 1997; Tanner & Galis, 1997). Consequently, the ECI Model encourages early childhood professionals to become familiar with those factors, characteristics, and instructional strategies that are reported to positively influence the inclusiveness of programs. The ECI Model also encourages early childhood programs to entertain a variety of alternative strategies that accommodate individual developmental patterns, such as continuous progress programs, tutoring, reduced class size, and the addition of instructional assistants (Buntaine & Kundert, 1997; Jimerson et al., 1997; Tanner & Galis, 1997).

In summary, the ECI Model provides a template to use as a guide for program planning that addresses our major concerns about children and the kind of educational opportunities they need. It is flexible enough to adapt to local demographics and characteristics of individual children and their families. In the spirit of reform, the ECI Model embraces innovative approaches and technological tools that equip children for life in the modern world.

TEN MAJOR CHARACTERISTICS

An interdisciplinary examination of relevant research and professional literature identified the following 10 major characteristics for the ECI Model:



1. Diversity

From the perspective of the ECI Model, a group of children is viewed not as one entity, but rather as a composite of unique individuals. The uniqueness of each child is prized, and diversity within the group is recognized as a strength. Research suggests that when teachers accept children's differences and emphasize their similarities, they help all children develop their strengths (Dean, Salend, & Taylor, 1993; Derman-Sparks & Force, 1989; York, 1991). Rather than presenting an obstacle, the different backgrounds and traits of children contribute to and enrich learning experiences. A diverse group of children can begin to see that differences in learning styles, knowledge, and capacities can strengthen the group as a whole (NCAS, 1994). Firsthand learning experiences about different people and cultures are abundant in

early childhood settings with diverse groups of children (Perez, 1994). Measures addressing diversity are woven into every component of the model. When children are diverse, programs must offer a variety of experiences, learning materials, teaching strategies and practices, and methods of assessment (Saracho & Spodek, 1995). Culture, race, ethnicity, language, socioeconomic level, and ability influence the program design and implementation of ECI programs. Each group of children represents a unique constellation of attributes. This rich palette of diversity is considered a valuable source of cognitive and social learning opportunities for all children.

2. Flexibility

Flexibility is a vital attribute that helps to address the diversity of learners in inclusive early childhood settings. The ECI Model is flexible in many different ways. Teachers adopt facilitative teaching styles that allow them to apply more or less structure, in accordance with children's preferences and needs (Barone, 1994; Salisbury, 1991; Schumm & Vaughn, 1991). The curriculum is used flexibly to support the learning of all children, however wide a span of ability the group represents (Eanes, 1997; Roberson, 1984). Teachers select learning materials and activities with flexibility in mind. Consequently, teachers can encourage creativity, support different learning styles, and meet a broad range of ability levels (National Association of State Boards of Education Study Group on Special Education, 1992; Roberson, 1984). The ECI Model allows teachers to change routines and time schedules to accommodate individual learning needs (Fuchs, Fuchs, Hamlett, Phillips, & Karns, 1995). Flexibility in deciding what is developmentally appropriate for children of minorities is also critical. Community input into these decisions can reduce the chance of cultural values clashing (Williams, 1994).

3. Authenticity

The ECI Model emphasizes assessment and learning in authentic contexts. Curriculum, materials, and the physical environment are designed to be meaningful and relevant, both culturally and personally. Familiar activities and materials are balanced with novel ones to expand children's knowledge of other cultures and languages. Purposes for learning are conveyed to children in ways they can understand, which increases the relevance of what they learn. Learning takes place in natural, authentic contexts, such as play interactions, outdoor experiences, and daily routines (Bricker, 1995; Brown & Lehr, 1993; Cook, Tessier, & Klein, 1996; de Melendez & Ostertag, 1997). Authentic opportunities for language-minority children to use their emerging language is more likely to be relevant and comprehensible (Krashen, 1982). Authenticity of learning is increased by frequently using sites in the community as learning environments. Children are encouraged to generalize their skills and derive meaning from these experiences through active, "hands-on" involvement (Beck, Broers, Hogue, Shipstead, & Knowlton, 1994; Notari-Syverson & Shuster, 1995; Seefeldt, 1997; Udvari-Solner & Thousand, 1995). The ECI Model encourages facilitation methods that are aimed at increasing the significance of children's actions upon the physical environment and of social interactions within the social environment (Bodrova & Leong, 1996).

4. Responsiveness

The ECI program responds to the unique characteristics and changing needs of individual children and their families. For example, the learning environment is viewed as a dynamic set of variables that is individually and culturally responsive. Rather than attempting to fit children into a rigidly constructed program, the ECI Model encourages teachers to enhance children's learning by being responsive to each child (Dean et al., 1993; Soto, 1991). ECI teachers learn about the culture of each child and his family. Moreover, they understand that individual variations within a cultural group make each family unique. Teachers convey respect and appreciation when they are sensitive and responsive to individual children and their families. Consequently, the curriculum, methods, physical environment, and management systems of the program are responsive to the cultural backgrounds, languages, unique characteristics, and individual goals of children and families served by the program (Cole, Dale, Mills, & Jenkins, 1993; Dean et al., 1993; Scruggs & Mastropieri, 1993; Soto, 1991).

5. Holism

The holistic aspect of the ECI model means that opportunities to learn are offered through experiences, rather than by practicing isolated skills in a piecemeal approach. This approach allows children to learn skills and concepts within a meaningful context (Carnegie Task Force on Learning in the Primary Grades, 1996; National Coalition of Advocates for Students, 1991, 1994). Holistic learning experiences are equally important for able learners (Barbour, 1992) and for children who have difficulty learning (Eichinger & Woltman, 1993; Scruggs & Mastropieri, 1993; Sears, Carpenter, & Burstein, 1994). The ECI Model also embodies holism in another sense of the word. The child's development is viewed from a holistic perspective because the ECI Model recognizes the interrelatedness of children's developmental domains, and because it seeks to enhance each child's overall development. Rather than focusing solely on particular weaknesses or talents, the ECI Model provides opportunities that nurture the development of the whole child (Allen & Schwartz, 1996; Barbour, 1992; Barclay & Benelli, 1994; Brown, 1991; Passow, 1994).

6. Organization

The ECI Model represents a well-organized program that places a premium on advanced, multidisciplinary team planning. The organization of the curriculum, learning environments, teaching strategies, and family involvement components are key. A well-organized, systematic approach to assessment of individual children drives instruction. Moreover, the evaluation of the program as a whole is integral to maintaining a well-organized approach to learning. "Organized" does not mean a high degree of structure or a rigid, "lock-step" approach to learning. On the contrary, organization and planning are used to preserve natural, experience-based learning opportunities. Ensuring that children who are diverse and who represent multiple ability levels are given opportunities to construct their own knowledge within natural contexts is, indeed, a challenge. Consequently, planning is organized and deliberate,

to ensure that contexts, experiences, and facilitation methods are matched to individual children, and that they serve to enhance or stimulate, rather than inhibit, their natural propensity toward learning (Baker & Zigmond, 1990; McIntosh, Vaughn, Schumm, Haager, & Lee, 1994). Forethought and deliberate planning contribute to the effectiveness of the learning environment. Teachers plan ways to enhance the meaningfulness of learning experiences for individual children. For example, one study found that the social interactions during free play among preschoolers, with and without disabilities, were enhanced only when teachers planned the curriculum and structured the environment to fit the activities (Kugelmass, 1989).

7. Collaboration

Collaboration is a hallmark of the ECI Model. Addressing diversity and a wide span of ability requires collaborative efforts that include professionals, families, and the community. Ecological orientations (Bronfenbrenner, 1979) that involve families and the community create vital networks for information and resources (Peck, 1993; Winton, 1993). In an effort to meet the needs of individual children and their families, the ECI Model uses team approaches to curriculum planning and program evaluation. Establishing collaborative relationships between early childhood professionals and specialists in other disciplines ensures balanced input and expertise (Atwater, Carta, Schwartz, & McConnell, 1994).

8. Accommodation

Rather than considering a group of children as a whole, the ECI Model takes into account the uniqueness of each individual. The ECI model clearly focuses on identifying ways to help each child experience success and progress through his or her areas of strength (Cook et al., 1996; U.S. Department of Education, 1993). Children are not expected to change to fit the program; rather, the program is designed to accommodate the learning goals, preferences, and abilities of individual children (Shepard, 1997; Tanner & Galis, 1997). Children receive any needed support to ensure their success. Adaptations or modifications of the physical environment, curriculum, materials, or activities may be needed to enhance a child's participation in learning activities with peers (Archambault et al., 1993; Arreaga-Mayer & Perdomo-Rivera, 1996; Miller, 1996; Salisbury, 1991).

9. Integration

The philosophical underpinnings and pedagogical approaches of the ECI Model represent an interdisciplinary blending of theories and practices. The synergy created by this integration strengthens the inclusion program for all children. Rather than meeting children's needs through segregated, "pull-out" programs and homogeneous groupings, the ECI Model employs integrative, heterogeneous approaches (Carnegie Task Force on Learning in the Primary Grades, 1996). Flexibility to meet children's needs is achieved through strategies such as mixed-age grouping, cooperative learning, and integrating therapeutic or enrichment opportunities into the curriculum. Integrative approaches are intended to encourage chil-

dren to value and cooperate with persons who are different from themselves. Equally important, children develop a positive self-concept, acquire self-esteem, and build self-confidence through the acceptance and respect they experience (Derman-Sparks, 1993).

10. Technology-based

Technology is an integral part of the ECI Model, as one of its aims is to prepare all children for life in a technologically sophisticated world. Therefore, children are given access to developmentally appropriate technological tools at an early age. Teachers use technological tools to fulfill their instructional planning responsibilities. Assessment, curriculum planning, management, and recordkeeping duties can be accomplished more efficiently using technological resources. For these reasons, technology is a key component in restructuring schools to better accommodate diverse groups of young children (Newsome, 1996). The ECI Model recognizes the role of assistive technology as essential for helping certain children succeed in early childhood settings. Such tools afford the possibility of meeting children's individual needs more effectively without isolating them from peer group interactions (Holder-Brown & Parrette, 1992; Holzburg, 1994; Ryba, Selby, & Nolan, 1995).

THE GOALS OF THE ECI MODEL

The goals for ECI Model are built upon three major foundational premises:

- Each child is unique.
- Group diversity is a strength.
- All children can learn.

The first premise reflects that each child is worthy of respect as a unique individual with strengths and abilities. The second premise expresses a valuing of diversity. It recognizes that differences lead to group strength for creating and problem-solving. Third, the belief that all children are capable of learning underlies a commitment to create learning environments that enable children to learn.

The ECI Model affords individual early childhood programs the flexibility to develop some goals that specifically address the configuration of diversity present among the young children served by the program. Five primary goals constitute a common core for the ECI Model. Specifically, the ECI Model seeks to:

1. Provide All Children With Equitable Opportunities To Learn and Be Nurtured in a Safe, Caring Environment

The ECI Model promotes educational equity for learners who are diverse in background and ability. Teachers believe that all children, regardless of culture, language, ethnicity, ability, or gender, deserve abundant opportunities to develop, learn, and experience success alongside their peers. To achieve genuine equity, each child must be understood in his own unique context, and a full range of possibilities must be offered. Teachers tend to underestimate the capabilities of children, and they often

misinterpret their performance (Dudley-Marling, 1993). The temptation to make assumptions about children's abilities or inabilities without data to support these assumptions must be abandoned. Countless times, children, even those with severe disabilities, have surpassed what others thought they were capable of achieving. True equity is possible only when early childhood teachers break glass ceilings and encourage all children to reach for the stars.

2. Enable All Children To Be Successful Learners, Now and for the Future

By focusing on each child's areas of ability and strength, teachers in ECI programs strive to find avenues for enhancing all domains of development. Literacy, problem-solving skills, cultural competence, and knowing how to function in a technologically advanced world are important for each child's future (Boyer, 1991; Carnegie Task Force on Meeting the Needs of Young Children, 1994). Providing an equitable, high-quality education is critical. Women are increasingly participating in the workforce, yet educational practices are not adequately preparing them for the challenge (American Association of University Women, 1991). In the case of persons with disabilities, statistics indicate that an education is vital for these individuals to gain access to the job market as adults. *American Demographics* magazine reports that disabled Americans in their mid-20s to retirement age who complete at least 16 years of education are four times more likely to be employed, compared to those who completed 12 years or less (Lehmann, 1997).

Teachers in ECI programs value children's abilities, even when those abilities are not popularly recognized as assets. For example, bilingualism, biliteracy, or the use of particular regional dialects of languages are frequently undervalued and even perceived as disabilities (Cummins, 1993; Nieto, 1993). When narrow views of language development prevail, children with knowledge of diverse languages may be categorized as developmentally deficient. Consequently, recognizing that more diverse knowledge of languages can lead to greater communicative flexibility for these children is crucial (Genishi, Dyson, & Fassler, 1994).

3. Create a Web of Support for Children and Their Families

An ecological orientation involves families and representatives of various community institutions as viable team members. The success of the Head Start program helped early childhood educators to recognize the positive effects of family involvement in early intervention programs. Programs involving children from families with low socioeconomic or culturally diverse backgrounds have traditionally provided links to the community with a comprehensive mix of economic, social, and educational assistance (Berger, 1991). For example, the High/Scope Perry Preschool Project, begun in the 1960s, used such an ecological approach to provide comprehensive services to African American children and their families. Nearly three decades of longitudinal research has revealed significantly positive results in terms of the participants' increased earning capacities, higher academic achievement levels, and lower crime rates as compared to nonparticipants (Schweinhart, Barnes, & Weikart, 1993).

Support for family involvement in early intervention for children with disabilities was legislated as a component of P.L. 99-457 in 1986. This law made provisions for an Individualized Family Service Plan, in which an ecological approach to programming is used. This type of approach is purported to not only focus on the strengths of the child, but also identify and create a focus on the strengths of the entire family (Deiner, 1993).

This same emphasis toward intervention using a family perspective is finding a new focus in the early intervention programs involving children with HIV and AIDS, considered a "family disease" by many experts. A complex combination of financial, social, medical, and psychological support is often necessary for families victimized by this disease. Team-based approaches that involve coordination across agencies are deemed most effective in providing services to children with AIDS and their families (LeRoy, Powell, & Kelker, 1994; Woodruff, 1994).

As professionals search for ways to better prepare diverse groups of children for success in school in particular and life in general, an emphasis on the early childhood years increases, and calls for ecological approaches to early childhood education continue to mount. A 1996 Carnegie Task Force report addressed ways to reverse the current pattern of underachievement by children in elementary schools, especially those from low-income families or from diverse cultural, linguistic, and racial backgrounds. The report states that the "circle of responsibility" for children's learning must include not only schools, but also preschools, afterschool programs, families, communities, and even the media. All of these influences were recognized as factors that exert a profound influence on children's learning. The Task Force recommended employing an ecological approach to education, with a heavy emphasis on the provision for high-quality early learning opportunities for children under the age of 10 (Carnegie Task Force on Learning in the Primary Grades, 1996). Teachers in ECI programs remain aware that families may differ from school personnel in their expectations for early childhood (Hoot, Parmar, Hujala-Huttunen, Cao, & Chacon, 1996). Therefore, program development must be sensitive to families, respond to culturally influenced preferences, and involve families in meaningful ways, in order to create a cohesive web of support for young children.

4. Help Children Belong in a Community of Learners

The ECI Model emphasizes the strength that diversity brings to a group of learners. Hence, developing a community of learners through collaborative activities is thought to create an ideal context for learning. Freeman and Freeman (1992) suggest that cooperative learning, paired with the whole language approach, can improve learning and social relationships among children in ethnically diverse classrooms (Freeman & Freeman, 1992). Au (1993) suggests that, in addition to peer cooperation, teachers should work collaboratively with students so that by a process of mutual adaptation, children of diverse backgrounds can have greater opportunities for literacy development. In the classroom community of learners envisioned by Sapona and Phillips (1993), teachers of children with disabilities capitalize on the diversity of the group; the children's interactions actually spawn challenges and problems that

are solved by group collaboration.

Opportunities to acquire academic, cultural, and literacy skills can be embedded in children's social interactions with their peers. For children who are gifted, the community of learners approach has been recommended to foster those collaborative skills needed to bring their ideas and strengths into team inquiry and cooperative problem-solving tasks (Passow, 1994). Facilitating children's friendships can help promote a sense of community that offers safety and nurturance to all children, including those who are "at risk" or have disabilities (Buswell & Schaffner, 1992; Guralnick, 1993; Peterson & McConnell, 1993). Supporting the formation of friendships among children in inclusive settings may encourage children's natural tendencies to "watch out" for one another, creating a "safety net" effect that benefits everyone (Winter, Bell, & Dempsey, 1994).

Au and Kawakami (1991) contend that promoting "ownership" of learning by minority students must be a fundamental goal of programs. These authors suggest creating a "hybrid classroom culture" that is congruent with the cultural values of the children, without replicating the values of any single group. Both social and academic goals are achieved through the interaction of the teacher and students within this classroom "culture." ECI classrooms give children the latitude to construct their group culture, drawing from their home and community backgrounds.

5. Create a Learning Environment That Offers Legitimate Challenges to Every Child

The goal of striving for academic excellence should not be abandoned for the sake of achieving equity. The ECI Model recommends taking steps to ensure that both equity and challenge are offered to each child. High standards are coupled with equally high expectations that all children, regardless of culture, language, ethnicity, ability, or gender, can achieve success.

The ECI Model seeks to maximize each child's potential by focusing on strengths and abilities. All children have the right to engage in learning activities that legitimately challenge them to reach their highest potential. Jorgenson (1994/95) contends that to be truly inclusive, a school must provide tailor-made challenges for all children, including those with significant disabilities. Rather than learning only function skills, all children have the right to develop higher-order cognitive skills (NCAS, 1991).

Providing opportunities for a well-rounded education is essential in inclusive early childhood programs. Inclusion for children with disabilities, however, frequently has meant an emphasis on the social aspects (Antia & Kreimeyer, 1992; Antia, Kreimeyer, & Eldredge, 1993; Buysse, 1993; Guralnick, 1993; Hamre-Nietupski, Hendrickson, Nietupski, & Sasso, 1993; Peterson & McConnell, 1993). The opportunity to develop interpersonal skills and gain the social acceptance of peers is certainly a significant benefit of inclusive education programs. However, these children also have the right to gain skills in all domains of development. Emphasizing the nurturance of well-balanced development for each child ensures both social and academic inclusion. Providing accommodations matched to fit individual children with disabilities can

offer the support they need to acquire cognitive, language, motor, and social skills (Joint Committee on Teacher Planning for Students with Disabilities, 1995; Sears et al., 1994).

In the ECI Model, learning activities provide an appropriate level of challenge for all children, including those with varying levels of language proficiency and with different home languages (Teachers of English to Speakers of Other Languages, Inc., 1995a). For children who are linguistically or culturally diverse, simply achieving equity or compliance with civil rights laws is not sufficient. Early childhood programs should support and encourage the efforts of these children to excel (Sosa, 1993). Au and Kawakami (1991) believe that children of minorities must have the opportunity to meet the curriculum goals expected of children in the mainstream culture. Furthermore, these authors assert that the usual curriculum goals should be exceeded. Minority students should receive instruction in additional areas, such as native language literacy (Au & Kawakami, 1991).

Programs based on the ECI Model offer able learners opportunities to learn at their personal level of challenge. The U.S. Department of Education's 1993 report on gifted and talented children cites research indicating that these children begin each school year already knowing 35 to 50 percent of the curriculum in their assigned grade level. Consequently, the report recommends raising the curriculum standards and providing these children with learning opportunities that offer greater challenges (U.S. Department of Education, 1993). For example, early readers in kindergarten and primary grades should be allowed to proceed in their literacy development, rather than marking time while other children in their classroom attain basic reading skills.

THEORETICAL FOUNDATIONS

In fields of child development and education, theories that explain how children grow and develop provide a platform of principles from which programmatic goals, curricula, and practices are formulated. The next section briefly summarizes the philosophical base of the traditional early childhood field, followed by a description of the theoretical stance for the ECI Program Model.

Foundations of Traditional Early Childhood Education

A number of major theorists have contributed to the foundations of traditional early childhood education. Jean-Jacques Rousseau initiated the idea that children unfold naturally, a belief that preceded maturationist theory (Williams, 1992). Gesell and other maturationists thought that children's experiences exerted less influence on their development than did biologically predetermined maturational levels (Brewer, 1995). Rousseau, Frederich Froebel, and Jean Piaget were key theorists who contributed to the understanding of play as a fundamental influence on children's development (Frost, 1992; Piaget, 1962; Williams, 1992). Piaget theorized that children construct knowledge through a process of adaptation to stimuli in the physical environment. He believed that children typically developed through a progression of stages, with each subsequent stage built upon the foundation of concepts acquired

in the previous period of development (Morrison, 1998; Piaget, 1952). Pestalozzi, and later Vygotsky, emphasized the importance of social interaction with parents and teachers during play and explorations. Pestalozzi believed that adults could help children become more observant during learning activities. Vygotsky carried this notion further, proposing that adult intervention could help children surpass their level of independent learning and progress into their "zone of proximal development" (Bodrova & Leong, 1996; Vygotsky, 1978; Williams, 1992). Maria Montessori contributed an awareness that birth to age 6 is a critical time period for learning. Montessori recognized that the child's "absorbent mind" made children highly receptive to learning. Through her work with children who were mentally retarded, Montessori recognized the importance of sensory discrimination and immediate feedback to young children's learning (Montessori, 1912/1964; Morrison, 1998). The theories of behaviorists, such as B.F. Skinner, made early childhood educators aware that shaping children's behaviors is possible through the manipulation of environmental variables (Schloss & Smith, 1994). A modern behaviorist, Albert Bandura, proposed the Social Learning theory, which describes how children can learn complex behaviors as a result of observing and imitating an admired person (Bandura, 1973). John Dewey championed the idea of engaging children in social problem-solving processes through flexible grouping, a practice now termed "cooperative learning." Dewey also advocated increasing the relevance of children's learning by offering opportunities for real-life activities or sociodramatic play enactments of daily life situations. He believed these experiences integrated the subject areas of the curriculum and stimulated children's learning across all domains of development (Morrison, 1998; Williams, 1992). Erik Erikson's theoretical work, which was based on Freudian theory, helped the field of early childhood education gain a better understanding of moral development as a series of stages in which children resolve socio-emotional conflicts (Erikson, 1950/1963). Finally, influenced by Piaget, Laurence Kohlberg theorized the existence of six stages through which moral reasoning developed (Levin & Nolan, 1996). These brief highlights of major contributions to traditional early childhood theory serve to underscore the varied nature of the influences on traditional early childhood education.

Foundations for the ECI Model

The ECI model's theoretical underpinnings are drawn from bodies of knowledge and sets of practices that evolved separately in various disciplines, including traditional early childhood education, special education, multicultural education, bilingualism, gender, and giftedness. In some of these fields, the theoretical and pedagogical stances that evolved are more narrow than the broad-based, eclectic foundation of traditional early childhood education. For example, the field of early childhood special education, historically, has relied more heavily on behaviorist theory and practice, resulting in a bent toward remediating children's skill deficits (Richarz, 1993; Safford, 1989; Widerstrom, 1986). In contrast, behaviorism is just one of the theoretical influences of traditional early childhood education.

A convergent theoretical foundation for boundaries. Mallory (1994) expresses skepticism regarding the efficacy of theoretical frameworks that are either very narrow or, at the other extreme, eclectic to the point of being boundless and all-encompassing. On one hand, a narrow theoretical base may not grant sufficient latitude to address the diversity of today's children. Conversely, one that accepts all theories, including opposing perspectives, is likely to result in a model that lacks unity and cohesion and fails to provide sufficient guidance to practitioners. Therefore, Mallory proposes a triangulated foundation for inclusion program models that converges three complementary theoretical perspectives.

The cognitive-developmental perspective, also known as the constructivist or developmental-interactionist approach, is the primary component of the foundation. The two additional theoretical perspectives that complete Mallory's model are the functional (or behavioral) perspective and the biogenetic perspective. The biogenetic aspects of the model relate to the growth and maturation of children influenced by their biological and genetic attributes. The constructivist perspective focuses on the expression of children's attributes as evidenced in their cognitive, linguistic, physical motor, and emotional-social abilities. The functional or behavioral aspects of the model refer to the behaviors children develop and use to function in their social environment. In agreement with Mallory's argument, a convergent theoretical foundation undergirds the ECI Model.

A strong constructivist core. Constructivism is a common theoretical plank that spans across fields to unite inclusive education efforts. Both early childhood and early childhood special education use constructivist approaches (Safford, 1989; Winter, 1997; Wolery & Bredekamp, 1994). Constructivism also appears as a point of intersection with other fields and school reform advocacy. Such approaches are widely recommended for use in early multicultural education and bilingual education (Calderon, 1996; Ovando, 1997; Saracho & Spodek, 1995). Many professionals in gifted education also endorse constructivist methods (Barbour, 1992; Ben Ari & Rich, 1992; Moss, 1992; Roberson, 1984). Science educators are encouraging use of active learning experiences for children of all ages (Mastropieri & Scruggs, 1995; Scruggs & Mastropieri, 1993), and advocates for gender equity in schools and school reform have proposed the use of constructivist-based methods (American Association of University Women, 1991; Au, 1993; Carnegie Task Force on Learning in the Primary Grades, 1996; National Coalition of Advocates for Students, 1991, 1994; Olsen, 1994).

Constructivist principles. A key principle of the constructivist approach is that children actively construct meaning from their interactions with the physical and social aspects of the world around them. Jean Piaget (1952) theorized that children construct knowledge as they interact with their physical environment through play, experiences, and exploration. New stimuli and information are considered in light of prior knowledge and understandings. According to Vygotsky (1978), the social environment plays a critical role. Discrepancies between new information and prior understandings are resolved either by the child alone or through interactions with other children and adults. "Scaffolding," or support by an adult or older child, can help children to move beyond their present knowledge into their "zone of proximal development" (Hendrick, 1998; O'Neil, 1992; Piaget, 1952; Vygotsky, 1978).

A convergent theoretical model for flexibility. Mallory's (1994) convergent theoretical model allows programmatic flexibility to address both typical and variant patterns of development. The ECI Model, in accordance with the comprehensive definition of inclusion, recognizes that all children do not follow typical patterns of development at the same pace. In the case of children with developmental delays or those who are mentally retarded, development progresses at a slower than average rate but follows the typical progression (Deiner, 1993). Conversely, gifted children show acceleration or special abilities and talents in one or more developmental areas (Davis & Rimm, 1994). Children can also evidence atypical patterns of behavior or development. These children may exhibit unusual additional behaviors or fail to develop some expected behaviors. For example, autistic children frequently display such behaviors as head banging or rocking (Deiner, 1993). The ECI Model also recognizes that children's developmental patterns are influenced by linguistic or cultural differences (Trawick-Smith, 1997).

It is evident that chronological age does not necessarily match developmental age. The ECI Model favors selecting practices that are individually appropriate, matching the child's characteristics, chronological age, and level of development (Carta, 1994; Saracho & Spodek, 1995; Tannenbaum, 1992). While Mallory's model provides theoretical boundaries, it has sufficient breadth to allow teachers to match their instructional practices to individual developmental patterns. Furthermore, it encourages an ecological orientation toward children and their families by recognizing the host of influences that are known to affect children's growth, development, and learning (Anselmo & Franz, 1995; Berk, 1994).

While the theoretical foundation for the ECI Model has a strong constructivist core, it also incorporates behavioral and biogenetic theory.

CURRICULUM AND APPROACHES

The pedagogical approach of a program can have serious consequences for young children, especially when groups are diverse. When teachers practice a transmission model that seeks to impart knowledge and skills, children become passive, dependent learners. Transmission approaches increase the hazard that some children, particularly those who are linguistically and culturally diverse, will be mislabeled as "learning disabled" or "at risk." Conversely, programs that are interactive or experiential in their approach can promote literacy development and afford children greater independence in their learning (Cummins, 1986, 1989).

Constructivist-based Curriculum and Practices

The constructivist approach provides a common foundation for designing the curriculum and selecting practices for programs serving diverse groups of young children (Winter, 1997). Recognition that typical children construct knowledge through active, "hands-on" experiences within a richly interactive, socio-cultural context leads to less reliance on didactic methods of teaching.

Deficit curriculum models abandoned. Experts have begun to abandon the idea of reductionist or deficit curriculum models, which are based on behaviorism and are designed to remediate perceived weaknesses or deficits. A constructivist perspective instead focuses on developing strengths by building upon previously acquired skills (Sapona & Phillips, 1993). Brown (1991) finds that curricula that are remedial or oriented toward basic skills result in a lack of motivation and the subsequent poor performance of minority students. Allen (1992) advocates using a curriculum that represents a developmental scaffolding for young children with disabilities. For children who are gifted, Barclay and Benelli (1994) propose a constructivist approach that includes mediating strategies based on Vygotsky's zone of proximal development; gifted children in an interactive environment are offered support in their construction of knowledge and are challenged to build upon their existing level of ability.

Advocating for constructivist models, Sapona and Phillips (1993) warn educators of the significant impact each of these models has on teachers' perspectives. Constructivists focus on a child's abilities and skills when planning learning experiences, while the reverse is true for reductionists. These authors believe that a reductionist "lens" has a negative effect on the classroom community of learners.

Authentic, child-centered experiences. The ECI curriculum emphasizes opportunities for children to construct knowledge and acquire skills through cooperative participation in authentic experiences. It is flexibile enough to evolve from the children's own experiences. Teachers espousing this curriculum respect the constructivist principle that children are intrinsically motivated to learn when they are interested, not merely reinforced for learning (DeVries & Kohlberg, 1987). Children are encouraged to take the lead in the learning process and have ample opportunities to initiate their own learning activities. Teachers respond to children's choices by planning curricular activities keyed to children's interests. Motivation is strong when children have choices and are allowed to pursue their own interests (Cavallaro, Haney, & Cabello, 1993).

Teachers incorporating the ECI Model avoid the use of extrinsic reinforcement, such as stamps, candy, stickers, and toys, to induce participation in learning activities. Through conversations, social interactions, and observation, teachers become aware of children's interests, and then plan correspondingly authentic learning experiences. Teachers encourage children to elaborate, question, hypothesize, and devise solutions to problems encountered during their learning experiences. As they participate in authentic experiences, children begin to construct concepts, see relationships, and practice skills through actual experiences (Castle & Rogers, 1994; Seefeldt, 1997). These experiences present concepts holistically, naturally integrating math, science, reading, and other traditional content. Such an integrated curriculum is recommended for young children representing multiple ability levels, including those who are gifted.

A child-centered, authentic curriculum that is rich in opportunities to learn through experiences provides critical support for literacy development. When children are linguistically and culturally diverse, authentic contexts encourage meaningful communication. Helping children to elaborate on these personal experiences is a powerful method of encouraging literacy development (Poplin, 1993).

Many of the traits that characterize an ECI Model's curriculum are also common to other constructivist curricular models. For example, the Project Approach (Katz & Chard, 1989), an American adaptation of the Reggio Emilia approach initiated in Italy, shares many of the ECI characteristics. The ECI Model differs from the Project Approach, however, in the degree of emphasis given to the accommodation of individual children, multidisciplinary team planning, use of technological tools, and efforts to provide support to families through an ecological approach.

For young children with disabilities, authentic experiences offer chances to generalize concepts and practice skills in real-world contexts (Beck et al., 1994; Notari-Syverson & Shuster, 1995). To maximize their participation, however, some of these children may require the use of adaptations or additional support from teachers and assistants. While enabling all children to participate is important, the ECI Model also ensures that children, including those with severe disabilities, have choices regarding their learning experiences. Because there are many ways to learn and participate, children need choices and different options for finding answers to their questions, as well as ways of expressing themselves (Brown & Lehr, 1993; Wolery, 1991). Such flexibility also is critical for children who are gifted. Rather than overintensifying the curricular expectations for children with high ability, ECI teachers are careful to plan high-quality experiences that evolve from the child's own desire to know (Klein, 1992; Roberson, 1984).

Providing on-site experiences through field trips to neighborhood and community locations is a powerful venue for learning (Cook et al., 1996; Seefeldt, 1997). Called "community-based" or "community-referenced" instruction, this versatile curricular approach has been used to provide meaningful contexts for functional learning in inclusion programs (Beck et al., 1994; Field, LeRoy, & Rivera, 1994; Helmke, Havekost, Patton, & Polloway, 1994; Notari-Syverson & Shuster, 1995; Udvari-Solner & Thousand, 1995). Knowing in advance the kind of experience children will have allows teachers to plan methods for facilitating learning and to modify or adapt tasks for certain children. Some children with disabilities may require assistive technology devices to enable their full participation (Gelman, 1993). See Chapter 5 for additional information regarding the advance planning of these community-based learning experiences.

Unfortunately, community-based authentic learning experiences are not always feasible as daily fare. Consequently, teachers use a variety of experiences in the ECI setting that bring different degrees of authenticity to the curriculum. Teachers add to the authenticity of learning experiences in the classroom by using a variety of realia collected from home and community settings as props for play and manipulation (Cook et al., 1996; Seefeldt, 1997). Technological tools are also useful for increasing the authenticity of experiences. Through CD-ROM technology, young children can see a lion and listen to it roar, discover how children in modern China live, or explore a rainforest in Brazil (Duttweiler, 1992; Means & Olson, 1994). These vicarious experiences serve as springboards for related, active, "hands-on" learning experiences within the ECI setting. Extensions are possible through children's explorations, manipulation of materials, creative arts, and play activities. Authenticity of

another degree is represented by activities that create natural contexts that are conducive to children's interactions, construction of knowledge, or practicing of skills. For example, whole language activities that place children in natural situations where language is connected to the event are helpful in developing the language skills of at-risk young children, those with disabilities (Bricker & Cripe, 1992), and linguistically diverse children (Crowell, 1991).

Play as a valid context for authentic learning. The importance of play in the ECI Model is never underestimated. Play is respected as a natural context for the learning of all young children. In contrast to isolated skill training, play naturally integrates skills into meaningful experiences, and provides rich contexts from which children can construct knowledge in various developmental domains. For instance, children construct physical and logico-mathematical knowledge during construction play with blocks. Play also helps children develop linguistic and social understandings in a natural context. Frequently, play enables children to learn social and moral understanding as they use problem-solving skills to resolve conflicts that arise (Chaillé & Silvern, 1996). Play is a natural venue for social interaction. In the ECI Model, play is considered a fundamental right that must be provided for all children, including those with severe disabilities. Free, open-ended play is a part of the daily curriculum and a key tool for preserving the emotional health of all children. This unstructured time is particularly critical when children are emotionally fragile, have arrested development, or have experienced trauma (Hanline & Fox, 1993; Koplow, 1996b).

Teachers in ECI programs understand the many advantages a play-based curriculum offers when the range of abilities among young children in the group is diverse. Providing a choice of toys and materials of varying complexity helps children find play props that are appropriate for their age and individual ability level. For children with severe disabilities, a play-oriented curriculum provides an opportunity to practice functional skills in a natural context with their peers (Hanline & Fox, 1993). The flexibility of a play-oriented curriculum provides opportunities for embedding various therapeutic interventions into activities. During play interactions with children, a speech and language therapist uses strategies to enhance language development. The interwoven relationship of the cognitive, language, and socio-emotional domains allows a language therapist to facilitate development as a totality during play interactions. The play context is also a natural one for authentic assessment of children's language learning. During play interactions, for example, the therapist or teacher observes the child's ability to use acquired skills in meaningful ways (Abrams, 1996). Also, play therapy can be embedded into the curriculum as a psychological early intervention. A trained clinician or teacher can soothe psychological wounds and help children make sense of their world (Koplow, 1996a).

Learning through interaction. As Vygotsky's theories have become more widely known, educators place greater emphasis on the socio-cultural contexts of the learning environment. Consequently, the teacher's role is being redefined to encompass more extensive interactions with children. Teachers in ECI programs are conscious of their responsibility for creating a socio-cultural context that promotes the goals of inclusion. Teachers are expected to give some advanced thought and plan-

ning to their role during interactions with children, as such interactions are highly influential to children's learning (Bodrova & Leong, 1996; Mallory & New, 1994). Children's abilities drive decisions regarding the kind and intensity of facilitation teachers use. By opting for the least intrusive methods of facilitation, teachers help develop children's independence in learning (Atwater et al., 1994; Joint Committee on Teacher Planning for Students with Disabilities, 1995). The ECI Model encourages teachers to begin with the strengths of children and their existing knowledge base derived from prior experiences. With children who are linguistically diverse, for example, the teacher provides scaffolding to advance the knowledge base and skills children previously developed via their primary language (Clark, 1995).

Collaboration and cooperative learning. Encouraging interaction among children and developing a sense of community or shared responsibility among learners is a priority in the ECI Model. Recognizing the influence of shared experiences on the development of interpersonal understanding, teachers plan experiences that foster cooperative interactions among children and consciously facilitate their collaborations. Children gain a sense of belonging or membership within their learning contexts when they share a growing fund of experiences with their peers (DeVries & Zan, 1996). Research indicates that the quality of socio-cultural contexts is one of the strongest influences on children's success (Wang, Haertel, & Walberg, 1993/94). Meshing Vygotsky's social learning theory with ideas about culture can advance school reform for children who are linguistically and culturally diverse. The teacher plays a primary role in shaping a collaborative context for the learning of all children (Au & Kawakami, 1991).

When language variations are present, children are likely to benefit from activities to learn within the social context of a cooperative group. A social context is ideal for learning language, especially in a linguistically diverse group. Collaborative interactions give children reasons to communicate in functional ways (Genishi et al., 1994). Wong-Fillmore (1991) reports that children need motivation to communicate successfully. ECI classrooms provide an atmosphere that helps children feel comfortable taking the risk (Wong-Fillmore, 1991) of playful experimentation with a new language. Children gain in ability and confidence as they use their new language skills in meaningful communication.

Knowledge and Skills for Today, Balanced With Lifelong Learning

The ECI Model balances the expansion of functional living skills with knowledge and skills children will need to become productive members of the workforce. The quality of children's lives is enhanced through acquisition of functional skills, such as self-care, safety, and social skills (Miller, 1996; Notari-Syverson & Shuster, 1995). Critical social skills include cross-cultural competence, cooperation, and conflict resolution (Boyer, 1991; Carnegie Task Force on Meeting the Needs of Young Children, 1994; D'Andrea & Daniels, 1996; Davidman & Davidman, 1994). Acquiring these skills has relevance for children now, and in the future. Preparing children for the future also means equipping them with scientific, technological, reasoning, communication, and literacy skills (Boyer, 1991; Darling-Hammond, 1996; Eanes, 1997; Iran-Nejad & Marsh, 1994). In the ECI classroom, all children, including those with

disabilities, are given the opportunity to learn beyond mere functional living skills. Teachers plan for experiences that help children expand their functional living skills, while providing opportunities to develop communication, literacy, and cognitive skills for lifelong learning (Stainback, Stainback, & Stefanich, 1996).

With the information explosion of the modern technological world, a massive amount of information is available. Learning it all is impossible. Consequently, it is critical to teach young children how to gain answers to their questions and to view their experiences from different perspectives, using an interdisciplinary approach (Cook et al., 1996; Miller, 1996; National Coalition of Advocates for Students, 1991). Teachers in ECI programs plan ways for children to explore their world, using mathematical, linguistic, scientific, and aesthetic processes and knowledge.

Multicultural education. Not only are opportunities for learning about others' cultures and languages offered to all children in the ECI program, doing so is encouraged. Linguistic knowledge and cultural literacy are viewed as significant assets that will enhance children's functioning in the modern global community.

In culturally diverse communities, teachers strive to make the content of the curriculum culturally relevant for all children (Teachers of English to Speakers of Other Languages, Inc., 1995a). The home languages and cultures of linguistically and culturally diverse children are valued and incorporated into the program. These children need opportunities to continue developing, both cognitively and linguistically, in their primary language. Strengthening the child's home language will facilitate acquisition of a second language and enhance chances for subsequent academic success (Au & Kawakami, 1991). The degree of language and culture integration is an accurate predictor of a minority child's school success. Conversely, when the goal is to substitute the children's culture or language with that of the majority, children's cognitive and social development suffer (Cummins, 1986, 1989).

Multicultural education is an integral component of themes, activities, and experiences in the ECI curriculum. Furthermore, themes and topics should offer role models and learning activities that appeal to both boys and girls (Sadker & Sadker, 1994). Using a constructivist approach, teachers encourage children to construct knowledge and understanding about others through social interaction, cooperative learning, and play. Teachers integrate opportunities to understand other people into planned experiences and capitalize on informal opportunities that arise as children communicate and interact. Beginning with their peers, children learn to interact with those whose cultural background, language, ability, gender, and other characteristics are different. An anti-bias approach to the curriculum empowers children and encourages critical thinking about discrimination. In contrast to "tourist" approaches that depict people stereotypically, the ECI curricula portray different people, languages, and cultures realistically in authentic contexts (Derman-Sparks, 1993, 1993/1994; Derman-Sparks & ABC Task Force, 1989; Soto, 1991; York, 1991).

Curriculum in the ECI Model is led by children's interests and emphasizes authentic experiences, play, collaboration, and multicultural knowledge.

Learning how to learn. The ECI Model emphasizes learning strategies that enhance children's cognitive processes. Teachers model learning strategies, plan activities that allow children to apply strategies, and give children feedback on their use of strategies (Joint Committee on Teacher Planning for Students with Disabilities, 1995). Children of all ages with diverse characteristics and ability levels are encouraged to develop metacognitive skills—an awareness and reflection on the types of learning strategies they devise and use. Teachers and peer interaction are critical to children's development of strategies to construct knowledge as they play, explore, and interact with people and materials (Chamot & O'Malley, 1996; Eanes, 1997; Moss, 1992; Passow, 1994; Pressley, Brown, Ell-Dinary, & Afflerbach, 1995). Although only meager research exists to explain how the development of metacognitive skills proceeds, it appears that these skills begin to develop very early.

As babies explore their environment during infancy, they encounter situations and obstacles that require problem-solving strategies. Research suggests an association between the development of metacognitive skills and the strength of a child's attachment to family members or caregivers. Children who feel confident that their caregivers are available to offer assistance are more likely to risk tackling difficult problems. Conversely, children with less security and trust in their caregivers' availability appear less motivated to engage in play with objects or other children (Moss, 1992). In addition to a secure relationship with family and caregivers, children need plenty of opportunities to learn through experiences. Physical or social problems provide the impetus for children to synthesize problem-solving. The holistic nature of experiential learning is vital; piecemeal skill development denies children the opportunity to devise and use strategies for exploring and learning (Roberson, 1984).

Differentiated Curriculum and Practices To Enhance Individual Success

Creating inclusion programs from a triangulated theoretical base, as Mallory (1994) proposes, gives teachers the flexibility to match their curricula and practices to individual children. Professionals in early childhood have begun to recommend abandoning the familiar concept of assembling a set of best practices for a field (Carta, 1994; Gonzalez-Mena, 1997; Johnson & Johnson, 1994; Richarz, 1993; Scruggs & Mastropieri, 1993). Instead, experts across fields are encouraging teachers to become competent in using a full repertoire of practices. From that repertoire, teachers select particular strategies to enhance the achievement of individual young children (Eanes, 1997; Gersten, 1996; Joint Committee on Teacher Planning for Students with Disabilities, 1995; Lay-Dopyera & Dopyera, 1992; Polloway & Patton, 1997). Therefore, training teachers to develop a repertoire of strategies and to differentiate the curriculum for individual children is fundamental to the ECI Model.

Children's abilities and learning styles, rather than the preferences of teachers, determine the instructional practices used in the ECI Model (NCAS, 1991). Providing a variety of activities and materials with differing levels of complexity helps develop children's individual strengths and abilities (Diamond, Hestenes, & O'Connor, 1994). The curriculum is flexible enough to provide sufficient rigor to afford challenge to

young children who are gifted, while recognizing their interests and needs (Gross, 1992). Rather than teaching to the average child, differentiated curriculum and practices recognize the uniqueness of individual children. Teachers plan for multiple levels of ability so that children do not feel chastized for being different from the average child in the group. Effective curriculum and instructional strategies are tailored to the needs of individuals in each early childhood group (Perry & Hoback, 1984; Saracho & Spodek, 1995; Schumm et al., 1995; Tannenbaum, 1992). In Chapter 5, ways to accommodate individual children will be explored in greater detail.

In the ECI Model, strategies and practices are differentiated and matched to the unique learning styles of individual children.

FAMILY AND COMMUNITY

Forging effective partnerships with families and the community is a vital dimension of the ECI Model. Such alliances constitute valuable resources for identifying and maximizing children's strengths. Understanding the families of individual children and the culture of communities leads to networking that lends support to the development and learning of all young children. By involving families and communities in planning, program implementation, and assessment, they become an integral dimension of ECI programs.

The Family Influences Children's Success

According to the ECI Model, programs that have a strong focus on families are more likely to support children's success. Families have an enormous influence on children's development, learning, and school achievement. One critical area of development that is highly sensitive to family influence is reading and literacy. The home environment appears to exert a greater impact on children's reading achievement than does the school environment. Parents who value reading encourage their children to have positive attitudes toward reading, and they expect their children to perform well in reading (Gottfried, 1984). Such positive attitudes and interest appear to contribute to children's early reading achievement. Families have a positive effect on children's early reading achievement when they provide books, read to children, and model reading (Fitton & Gredler, 1996; Gottfried, 1984; Greaney, 1987; Weinberger, 1996). Interactions with parents during story reading help children use metacognitive skills that contribute to more critical reading (Brenna, 1995; Webster, Beveridge, & Reed, 1996).

Unfortunately, sometimes the family can exert a negative effect on children's learning. For example, the socioeconomic level of a home appears to correlate negatively with children's reading for leisure (Gottfried, 1984). Furthermore, some studies have found that boys who are reared in families headed by a female may view reading negatively, considering it a "feminine pursuit" (Anderson, 1983). In the ECI Model, emphasis is placed on encouraging families to interact with children in meaningful ways that promote their children's success.

Responsive Partnerships With Families

Responding to children and their families as individuals is vital to the goals of the ECI Model. Each child and each family possesses a unique constellation of characteristics and strengths. The ECI Model aims to help families identify their existing strengths and acquire new resources to better care for their children. Au (1993) suggests that knowledge of children's cultures and customs can be gained by establishing relationships with families. Furthermore, applying this principle to families of racial or ethnic minorities may help to empower them within the community (Au, 1993).

Individual families' perspectives. The ECI Model strives to understand the perspectives of families regarding all aspects of the program. Families can have different views of their child's program, and of their role or level of involvement in that program. For example, empirical evidence suggests that families with children whose development is delayed or atypical may experience different reactions than families with children whose development is typical. Families with children who are experiencing difficulty in learning are usually positive about the potential benefits for their child in the general education settings. These families are also less likely to establish friendships with families of children with typical development (Bailey & McWilliams, 1990). Responsive teachers help establish informal support networks that benefit all families, including families with children who have disabilities. These relationships provide positive moral support, opportunities to discuss common parenting concerns, resources for crisis child care, and social activities (Galant & Hanline, 1993). In the ECI Model, teachers are encouraged to be empathetic and respectful of family members who are at different stages of coping with a child's exceptionality. Teachers can be valuable sources of information for, and provide moral support to, families during these times of emotional stress and turmoil (Gargiulo & Graves, 1991).

The ECI Model recognizes nontraditional strategies that can often foster the participation of linguistically and culturally diverse families in their children's program. Typical early childhood settings assume that families have the time, financial resources, and confidence needed to initiate partnerships with teachers and schools. Linguistically and culturally diverse families, however, often struggle with communication barriers, financial and economic burdens, and lack of literacy or educational skills. Feelings of inadequacy or devaluation related to these factors can undermine the family's cultural identity. Such families, especially migrant and recently immigrated families, often suffer from a lack of acceptance as they enter a new community, leading to concerns for their family's safety. Teachers must value these families and focus on the strengths and contributions each family brings to their children's early care and education. By holding high expectations for each family and working toward helping families overcome logistical and attitudinal barriers that potentially limit their involvement, teachers can make families equal partners in supporting the growth and development of children (Salend & Taylor, 1993; Sosa, 1996).

Families of gifted and talented young children also need such responsive partnerships. Parenting a gifted child is complicated beyond the usual struggles. Families need supportive relationships to help allay their concerns and relieve the pressure of

helping their children fulfill their highest potential. To properly nurture gifted children, families need help in gathering resource materials and identifying community agencies and institutions that can provide enriching experiences (Passow, 1994). Rearing gifted children is demanding on parents' time, financial resources, and patience. Furthermore, parents must balance their psychological investment in the gifted child with their responsibilities to, and relationships with, other children in the family. Gifted children can overwhelm and exhaust their parents with their intensity and nonconformity. In the ECI Model, teachers are vital partners as they help families find access to resources and provide emotional support to parents (Walker, 1993/1994).

Partnership in the ECI Model means sharing power with families. Families are offered a full range of ways to become involved with their children's care and education.

Strong lines of communication. The ECI Model considers diverse families and communities to be valuable resources. Strong lines of communication are established between families and all school personnel. Written communication is made available in the home language of families and, when needed, interpreters are used for meetings, conferences, and other oral communication events. These measures communicate the value and worth that the school places on families and their languages. Families are encouraged to participate in a full range of school-related activities, such as joining parent-teacher organizations, assisting in classrooms, volunteering for projects, and participating in school governance.

The ECI Model provides ideas for helping families extend children's learning activities in the home. Parent education components of the program are focused on the concerns of families, rather than taking a remedial approach that undermines parents' self-esteem and respect. Training is offered to all family members who wish to participate. Efforts to include members of the children's extended families, such as grandparents, have proven highly effective in many programs serving African American children (Salend & Taylor, 1993; Sosa, 1996; Teachers of English to Speakers of Other Languages Inc., 1995b; Zucker, 1995).

Cultural competence. The ECI Model recognizes that both teachers and families in culturally pluralistic communities unconsciously operate from their own cultural framework. Beginning with this premise, teachers are encouraged to seek an understanding of each family's cultural perspective. Open communication allows teachers and families to compare their perspectives and align their purposes. Teachers ask families about their preferences regarding child rearing practices and routines, curricula, learning environments, and parent education. Teachers improve their relationships with families through effective communication, while maintaining respectfulness and using problem-solving approaches to resolve cross-cultural differences.

Teachers remain alert to cultural differences in how families respond (Gonzalez-Mena, 1997). Families of some cultural heritages rely on fewer words and a richer palette of nonverbal communication. The ECI Model trains teachers to observe and

interpret the nonverbal communication signals of children and their family members. Teachers develop the understanding that behaviors, such as touch, smiling, eye contact, and personal space, can have different cultural interpretations (Gonzalez-Mena, 1997; Gudykunst & Kim, 1992). Research indicates that parental expectations and the degree of participation they are willing to contribute can be influenced by culture. Cultural factors also may influence the kind and frequency of communications between families and teachers. For example, in a cross-national survey focusing on preschools, Finnish parents reportedly desired contact with teachers only when problems arose. Yet, the practice of meeting regularly with parents was reported by teachers in Finland (Hoot, Parmar, Hujala-Huttunen, Cao, & Chacon, 1996).

Communication is critical if parents are to understand the rationale of certain instructional practices used in the ECI Model. In the case of linguistic and cultural diversity, some families may resist attempts to support their child's first language, instead expressing their desire to have their child be in classrooms where only English is spoken. Teachers in ECI programs carefully explain the benefits of supporting the development of strong linguistic and literacy skills in the child's first language as a vehicle for acquiring a strong second language (Teachers of English to Speakers of Other Languages Inc., 1995b). Workshops can train families to use instructional strategies at home to promote children's literacy development. Parents of kindergartners are taught effective emergent literacy strategies (Medina, 1995).

The establishment of an effective home-school connection is an ongoing process. Informal strategies can be integrated into the curriculum; teachers periodically can give children homework assignments that involve asking their families to respond to questions about family customs. These assignments are coordinated with curricular themes so that children can draw their home culture into the unit of study. Children are encouraged to take home books and visit community libraries. Home visits are also powerful tools in creating a bond between families and schools (Leone, 1995).

Culturally competent teachers listen to families and respond to their concerns.

Support for the Home Life of Families

The ECI Model establishes a home-school connection that promotes family involvement in school and also supports home life. Creating such a balance can build a more contiguous framework of support for advancing all domains of a child's development. Goodman and Curry (1991) warn against teachers encouraging families to support school by stressing homework and school-like activities at home. This practice makes home an extension of school, rather than allowing children to explore recreational activities and hobbies that add richness to family life (Goodman & Curry, 1991).

For some families, however, merely providing basic food and care is a challenge. In Chapter 1, the difficulties faced by homeless families and those living in poverty were described. Teaching families parenting skills and helping families gain access to assistive resources can have a tremendous effect on children's learning. Studies

indicate that malnutrition, inadequate housing and schools, lack of medical attention, and frequent illnesses can lead to lifelong impairment of cognitive skills and learning. When enriched education programs, guidance from parents, and opportunities for social stimulation are combined with good nutrition, children's chances for success improve (Brown & Politt, 1996).

Unfortunately, some families do not make use of community services. Misperceptions regarding eligibility or need are some of the reasons for underutilization of community services (Sontag & Schacht, 1993). A critical aim of the ECI Model is to improve the functioning of families by creating a system of services for ongoing support (McBride, Brotherson, Joanning, Whiddon, & Demmitt, 1993). Consequently, ECI programs help create links with community agencies to make services more easily accessible (Galant & Hanline, 1993). Furthermore, multidisciplinary planning teams assist families by facilitating the collaboration of multiple agencies so that services are coordinated and duplications of services are avoided (Repetto & Correa, 1996).

Sensitivity is needed to avoid adding to the stress that families often experience, especially those with children who have delayed development or disabilities. It is important to establish relationships that respect families' choices, especially regarding the kind of role they wish to assume in their child's program. When teachers establish open lines of communication, they can discover the kinds of community participation each family values, such as church, cultural events, or organizations. Helping families maintain these community contacts helps preserve a sense of normality in their lives. Teachers can help families to accomplish this goal by knowing what kinds of resources and agencies are available to help families care for their child's special needs (Bailey & McWilliams, 1990).

Various Levels of Family Involvement

The ECI Model strives to create a family-friendly early learning environment by offering many different levels of involvement. Teachers are trained to recognize family strengths and encourage families to choose the degree and intensity of involvement that suits their particular situation and preferences. Involvement can range from providing support for children's development and school projects to sharing power in decision-making and policy-setting processses (Rosenthal & Sawyers, 1996). The most significant levels are those involving families in critical decisions about the care and education of their children. Federal mandates (such as IDEA) guarantee families of children with disabilities the right to participate in decisions regarding placement, programs, and related services. These decisions are deliberated during multidisciplinary team meetings to develop the Individualized Education Program (IEP) for school-age children, or the Individualized Family Service Plan (IFSP) for families with younger children (Underwood & Mead, 1995).

Many valid reasons exist for creating early childhood environments that are conducive to high levels of family participation. Research indicates that high levels of family involvement in programs are associated with children's success in school (Griffith, 1996; Shumow, Kang, & Vandell, 1996). Gonzalez-Mena (1997) explains

that rather than presenting a threat to teachers and schools, family empowerment results in the activation of personal power. Parents report feeling empowered when they are highly involved in their children's education. Apparently, these feelings of empowerment are transmitted to their children, resulting in additional positive effects (Griffith, 1996).

Family and Community Alliances

The ECI Model establishes partnerships with families and community members to provide a network of human resources to strengthen ECI programs. From school to national levels, organized groups of parents and community members can lobby for policies that are more amenable to inclusion, and can advocate for additional resources. Such advocacy has influenced the allocation of educational provisions for diverse children, including those who are linguistically and culturally diverse (Sosa, 1996), have disabilities (Deiner, 1993), or display giftedness (Passow, 1994).

Family and the community alliances can assist in procuring materials and mobilizing people to support ECI programs (Fern, 1995; Passow, 1994). For example, technological tools for ECI classrooms can be extremely useful to certain children with disabilities, yet they are expensive. It is sensible, then, to seek partial funding from external sources for specialized assistive technology devices (Parette, Hourcade, & VanBiervliet, 1993). The rapid pace of technological innovation results in the need to recycle equipment periodically. Consequently, initiating partnerships with businesses can become a mutually satisfying relationship that provides needed resources to ECI classrooms (Oddone, 1993). Resources gained from community agencies, institutions, businesses, media, industries, museums, and libraries are usually state-of-the-art.

The ECI Model uses an ecological approach to support families. Families and the community are considered valuable partners with early childhood programs.

ADMINISTRATION AND PERSONNEL

Administrators' attitudes toward inclusion can either help shape the program in a positive direction or undermine its viability. In the ECI Model, the administration strives to establish congruence among each component of the program to provide a solid foundation of support for the success of each child. The pro-inclusion stance of an administrator encourages teachers to collaborate and seek methods that include all children. Administrators' major duties include articulating the mission of the program, and garnering family and community support (Hewit & Whittier, 1997).

Clearly Delineate Lines of Administrative Responsibility

The lines of administrative responsibility in the ECI Model are clearly delineated and communicated to personnel and families. Designing inclusion programs frequently involves the merger of separate programs. At the very

least, ECI programs entail the collaboration of various specialists and personnel. Often, these programs and personnel follow separate lines of administration. The lines of responsibility must be clarified to avoid confusion. While this step in program design is critical to the continuity and support of the program, accomplishing it can be complicated. For example, when a special education program for children who are blind or visually impaired is merged with a general kindergarten class on an elementary school campus, two different lines of administration intersect. Designing a strong administrative component and a cohesive program requires effective communication, articulated roles, and, at times, negotiated problem-solving.

Administrators Provide Knowledgeable Leadership

Administrators in the ECI Model are well informed about inclusion and are prepared to assume a leadership role for a complex program. They are familiar with professional guidelines for personnel preparation and practice that are relevant both to their specific program, and to the children being served (Winter & Van Reusen, 1997). It is critical to formulate an effective inclusion program plan before its implementation. Good intentions, alone, are an insufficient foundation (Winter & Van Reusen, 1997). Administrators of ECI programs involve all stakeholders in serious program planning efforts before initiating a program. Once initiation has begun, decision-making responsibilities are again shared by teachers, staff, family members, and the administration.

Administrators serve a key role in ensuring that appropriate staff development opportunities are provided. Positive implementation is more likely if the training fits the teacher's style of instruction and matches with goals for children (Wang et al., 1993/94). To avoid fade-out, further administrative support is needed after training has ended (Grace, 1993). Keeping teachers and staff energized and helping them try the new ideas creates a sense of shared vision and empowers teachers. This approach also reinforces the collaboration of families with staff to create true partnerships in support of children's development and learning (Epstein, 1995).

Administrators Provide Moral Support and Procure Resources

Administrators can provide empathy and moral support to teachers who, at times, may find collaborative teaching and the complexities of inclusion programs to be stressful. One group of teachers in an inclusion program, however, reported desiring a more enlightened basis for the empathy they received. Although they felt their administrator was empathetic and had provided the resources requested, they believed that the administrator had not spent time observing in their classrooms. The teachers thought it would have been beneficial for the administrator to gain firsthand knowledge of their teaching circumstances in the inclusion setting (Winter & Van Reusen, 1998).

Administrators can significantly help teachers promote children's positive behaviors by discovering ways to improve the social and physical aspects of the learning environment (Cheng, 1994); adjusting time schedules to help teachers accommodate children's play and learning needs; and procuring tangible resources, such as com-

puters, special technological products, and authentic materials. Administrators also can seek outside funding sources and grants to finance extra expenses, such as field trips for community-based experiences. Technical support, from consultants or through inservice training, is another vital contribution administrators may offer (Hewit & Whittier, 1997).

Administrators provide knowledgeable leadership for the ECI program. They understand the goals of the ECI Model and collaborate with teachers, families, and the community to accomplish these aims.

Teachers View Themselves As Teachers of All Children

Collaborative planning, effective communication, and shared responsibilities all are aspects of the teacher's role in ECI programs. Staff in ECI programs feel responsible for all children, regardless of gender, family income, or ability. All teachers must assume responsibility for each child's learning. Unfortunately, one national survey reported that general education teachers voice a preference for teaching students who learn easily. The investigators reporting these findings suggest that this preference may be linked to the teachers' lack of confidence in their ability to plan for children with special learning needs (Joint Committee on Teacher Planning for Students with Disabilities, 1995). Similarly, another national survey revealed that general classroom teachers make few accommodations for children who are gifted and talented (Archambault et al., 1993).

An emerging idea in bilingual education is the idea that acquisition of English as a second language (ESL) is a responsibility shared by ESL and regular education teachers. Yet, misconceptions regarding the teaching of children who are linguistically diverse, or who speak in nonstandard dialects, may result in teachers feeling less responsible for educating these children (Perez, 1996). Rigidly drawn lines of distinction delineating the responsibilities of teachers and specialists only serve to label children and undermine the collaborative planning process.

THE LEARNING ENVIRONMENT

The learning environment is a critical component for supporting teaching and learning in the ECI Model. This environment is considered a complex, multidimensional ecology, comprising three categories of factors that interact to create the learning environment. First, individual children's unique characteristics, backgrounds, and preferred learning styles can influence the effectiveness of the learning environment. Second, the physical structure and properties of indoor or outdoor environments must be taken into account. Third, socio-organizational factors also create a climate or atmosphere that influences children's learning.

Young children are particularly sensitive to these environmental variables. Consequently, the ECI Model encourages teachers to recognize the possible influences these variables may exert (Gifford, 1997; Weinstein,

1979). Instructional planning in the ECI Model takes into account both socio-organizational and physical environmental variables. Planning teams, or individual teachers, strive to match characteristics of the learning environment to the traits of individual children. The goal is to create a safe, effective setting that supports each child's learning and overall development. Chapters 3 and 4 provide detailed information and strategies for accomplishing this goal.

The ECI Model expects multidisciplinary planning teams to consider variables in the learning environment and their possible effects on children.

ASSESSMENT AND EVALUATION

Assessment precedes and informs curricular planning in the ECI Model. Teachers use accurate data accumulated for each child to guide their efforts and match learning opportunities to individual children. Actual data that describes individual children's progress leads instructional planning. Teachers do not make broad assumptions about children's abilities based upon diagnostic labels or upon generic descriptions of characteristics associated with gender, disabilities, or specific cultural or ethnic groups.

Role of Assessment

The primary role of assessment in the ECI Model is to lead instruction. Prior to curriculum planning, teachers collect assessment data that will help them select learning activities and instructional strategies that match the needs of individual children. In other words, assessment is focused on obtaining information about individual children that allows teachers to tailor effective instructional planning to each child's abilities and needs. Standardized tests and diagnostic assessments that are used in early childhood settings simply for labeling or excluding children from programs are inappropriate (McLean & Odom, 1993). Assessment should focus on determining ways to enhance each child's opportunities for successful learning.

Broad-based Assessment

The goals of the ECI Model are supported best when assessment is broad-based. Methods of reporting children's progress should enable teachers to accurately reflect each child's strengths and potential (National Coalition of Advocates for Students, 1991). The role of assessment in identifying the strengths and abilities of children and their families is vital to the ECI Model. By using assessment to inform planning and monitor implementation of curriculum, teachers are better able to support children's developmental learning. To achieve this goal, multiple assessments are used to gain an accurate view of all developmental domains (Fox, Hanline, Vail, & Galant, 1994; Irvin & Walker, 1994).

Assessment methods and materials must be acceptable to families (McLean & Odom, 1993). Consequently, the ECI Model expects teachers to establish dialogues with parents to gain their input and evaluation of assessment strategies and instruments.

The validity of assessment tools used in the ECI Model is evaluated in light of the dominant languages and cultures of children enrolled in the program (Teachers of English to Speakers of Other Languages, Inc., 1995a, 1995b). Alternative assessments increase the fairness of evaluation processes for children who are culturally and linguistically diverse (Fern, 1995; Hartly & Johnson, 1995; Schauber, Morissette, & Langlois, 1995; Zucker, 1995).

Authentic Assessment

The ECI Model emphasizes the authenticity of learning experiences. Such authentic contexts for learning require authentic methods of assessment. Authentic forms of assessment have been recommended as viable tools for judging the performance of schools involved in reform and restructuring efforts (Wolf, LeMahieu, & Eresh, 1992). This type of assessment also has been recommended for children of different ability levels, including those who are gifted and talented (Wright & Borland, 1993), and has been used widely in programs serving the linguistically and culturally diverse (Garcia, 1994; Gonzalez, Brusca-Vega, & Yawkey, 1997; Wright & Borland, 1993).

Play-based measures, systematic observations, and portfolios are popular forms of authentic assessment (Benner, 1992; Bergen, 1993; Kindsvatter, Wilen, & Ishler, 1996; Miller, 1996; Mindes, Ireton, & Mardell-Czudnowski, 1996). Authentic assessment allows for the evaluation of children's performance in community-based settings or in authentic contexts re-created in the classroom. Embedding such assessment in thematic units, projects, play, and cooperative learning experiences is an efficient use of time for teachers. Plus, children do not have to lose time for engaging in active learning by participating in assessment tasks. Instead, authentic situations for learning double as contexts for gaining assessment data. Such embedding of authentic assessment in authentic learning experiences is beneficial when time and personnel are limited (Kindsvatter, Wilen, & Ishler, 1996; Linn & Gronlund, 1995; Miller, 1996; Mindes et al., 1996).

Not all families, however, are comfortable with the use of authentic assessment in early childhood settings. Parents of high achievers may resist a move from reliance on standardized achievement tests toward incorporating more authentic assessments. These parents may be concerned that broadening policies to allow innovative assessments may threaten their children's academic status. Other families that resist changing the status quo are those that view education as a finite body of knowledge, rather than an ongoing process involving multiple domains of development (Fern, 1995).

Innovative Assessment Tools

Two categories of innovative assessment tools are used in the ECI Model. The first is ecobehavioral assessment, a category of tools that enables teachers and program evaluators to examine the effects of multiple variables that affect children and their learning in ECI programs. Gaining information about individual children for use in planning instruction and compiling records of each child's progress is, certainly, a vital function of assessment. However, teachers also must know if their efforts toward inclusion are working:

- Are the selected teaching strategies and accommodations effective?
- Is the environmental design of the classroom adequate for promoting each child's success?
- Does each child have sufficient opportunities to learn, acquire skills, and engage in social interactions with peers?

Positive answers to these questions are critical to the success of inclusive early childhood education. Ecobehavioral tools can provide valuable information to assist in answering the questions (Arreaga-Mayer, Carta, & Tapia, 1992; Arreaga-Mayer & Perdomo-Rivera, 1996; Atwater, Carta, & Schwartz, 1989; Carta, Atwater, Schwartz, & Miller, 1990; Carta, Greenwood, & Atwater, 1985).

The second category of assessment tools is technology-based. These assessment instruments give greater flexibility to teachers. Computer programs enable efficient recording and analyzing of observational data. Expert diagnostic systems help identify learning difficulties and can be linked to programs that suggest curricular strategies. Ecobehavioral analysis programs help identify optimal learning conditions for specific children and evaluate the effectiveness of instructional practices (Fuchs, Fuchs, & Hamlett, 1994; Greenwood, 1994; Greenwood, Carta, Kamps, Terry, & Delquadri, 1994; Greenwood & Rieth, 1994).

Authentic assessment is a key tool in the ECI Model. However, innovative methods, such as ecobehavioral analysis and technology-based assessment, also are used.

Program Evaluation

A comprehensive program evaluation component is essential to the effectiveness of the ECI Model. Regular evaluations that involve all stakeholders yield valuable information that can influence ECI policies and procedures. While it is beyond the scope of this book to detail the numerous methods of conducting program evaluations, the Division for Early Childhood of the Council for Exceptional Children (1993) offers a valuable section on this topic. Their publication discusses standards for program evaluation as a process and recommends practices for program evaluation. The suggested practices could serve as a starting point for devising evaluation tools for specific ECI programs in different early childhood contexts.

When existing programs are scheduled to be reconfigured using the ECI Model, a program evaluation should be conducted beforehand. It is important to establish a base line using evaluation data to detect the strengths and weaknesses of the existing program or programs targeted for change. This programmatic base line then becomes a tool when revamping the program, and it can serve to gauge the effectiveness of the changes.

Use Professional Guidelines Specific to the Population

In the ECI Model, professional guidelines are considered valuable evaluation tools. Comparing existing program components and practices to suggested guidelines helps

planning teams and individual teachers to set goals. Winter and Van Reusen (1997) used a context comparison evaluation technique (Stufflebeam, 1967, 1971) to evaluate a kindergarten program that included deaf and hard of hearing children. These investigators derived two sets of teacher responsibility statements from professional guidelines to compare with data collected through observation and teacher reports. This method could be used to establish a base line prior to initiating program changes that could be used to evaluate implementation of program changes.

Instruments chosen or developed for program evaluations must suit the population of children served by the ECI program. The applicability of practices must consider the specific characteristics of children and their families (Wolery & Bredekamp, 1994). For example, Winter and Van Reusen (1997) evaluated a kindergarten inclusion program that included a large population of children with a specific disability—deaf and hard of hearing children. Two sets of professional guidelines were used in their program evaluation procedures. One set was developed for inclusive early childhood programs (Division for Early Childhood Council for Exceptional Children, National Association for the Education of Young Children, & Association of Teacher Educators, 1995), and the second set of guidelines specifically addressed recommended practices for serving children who were deaf or hard of hearing (National Association of State Directors of Special Education, 1995). The latter set of guidelines was deemed necessary to evaluate aspects of the program that might be peculiar to this inclusion program.

In the ECI Model, program evaluations also address gender equity. Sadker and Sadker (1994) report that many busy teachers are unaware that they are using gender-biased practices, such as giving boys more attention, time, and feedback than girls. For example, teachers in one preschool either interrupted girls who were speaking, or they allowed others to interrupt the girls at a greater rate than they did with boys (Hendrick & Stange, 1991). Simple observation and tallying techniques can be used by a colleague or third-party observer to provide a base line for biased practices. Evaluations of teachers in early childhood classrooms could lead to changes in the program, such as staff development components, to improve gender equity in early childhood programs (Sadker & Sadker, 1994).

KEY CONTRASTS

Key ways the ECI Model may differ from other popular early childhood models:

- The theoretical foundation is convergent, neither focused narrowly nor, at the other extreme, all-encompassing.
- Emphasis is placed on learning how to learn. The teacher's role goes beyond facilitation. Teachers are expert cognitive strategists who model strategies for learning and help children develop their own strategies.
- The ECI Model seeks to address the learning of children with atypical patterns of development for whom practices that ordinarily match children's development may not be appropriate, given their age and individual characteristics.
- To achieve individual appropriateness, accommodation is emphasized.

- This model does not assume all children are capable of initiating their own learning.
- Assessment focuses on identifying children's strengths.
- The curriculum focuses on children learning through their strengths.
- A high degree of professional collaboration and family involvement is expected for aspects of the program, including decision-making, planning, and evaluation.
- Environments are considered to be a powerful influence. Environments are therapeutic, encourage communication and interaction, foster literacy, and enhance concept development.
- Technology is integrated into the program as an instructional tool, assistive device, and a resource for teachers.
- An ecological approach offers support to children and their families during the critical early childhood period.

REFERENCES

Abrams, S. (1996). In their own words: The work of the language therapist in preschool. In L. Koplow (Ed.), *Unsmiling faces: How preschools can heal* (pp. 64-74). New York: Teachers College Press.

Allen, K. (1992). *The exceptional child: Mainstreaming in early childhood education* (2nd ed.). Albany, NY: Delmar.

Allen, K. E., & Schwartz, I. S. (1996). *The exceptional child: Inclusion in early childhood education* (3rd ed.). Albany, NY: Delmar.

American Association of University Women. (1991). *Shortchanging girls, shortchanging America: A call to action.* Washington, DC: Author.

Anderson, S. (1983). Reading aloud to young children: Perspectives of parents. *Reading Research and Instruction, 27*(4), 59-64.

Anselmo, S., & Franz, W. (1995). *Early childhood development: Prenatal through age eight* (2nd ed.). Englewood Cliffs, NJ: Merrill/Prentice Hall.

Antia, S. D., & Kreimeyer, K. (1992). Project interact: Interventions for social integration of young hearing-impaired children. *OSERS News in Print, ED 348-806*, 14-20.

Antia, S. D., Kreimeyer, K., & Eldredge, N. (1993). Promoting social interaction between young children with hearing impairments and their peers. *Exceptional Children, 60*(3), 262-275.

Archambault, F. X., Westberg, K. L., Brown, S. W., Hallmark, B. W., Zhang, W., & Emmons, C. L. (1993). Classroom practices used with gifted third and fourth grade students. *Journal for the Education of the Gifted, 16*(2), 103-119.

Arreaga-Mayer, C., Carta, J., & Tapia, Y. (1992). *Ecobehavioral system for the contextual recording of interactional bilingual environments: Training manual.* Kansas City, KS: University of Kansas, Juniper Gardens Children's Project.

Arreaga-Mayer, C., & Perdomo-Rivera, C. (1996). Ecobehavioral analysis of instruction for at-risk minority students. *The Elementary School Journal, 96*(3), 245-258.

Atwater, J. B., Carta, J. J., & Schwartz, I. S. (1989). *Assessment code/checklist for the evaluation of survival skills: ACCESS.* Kansas City, KS: Juniper Gardens Children's Project, Bureau of Child Research, University of Kansas.

Atwater, J. B., Carta, J. J., Schwartz, I. S., & McConnell, S. R. (1994). Blending developmentally appropriate practice and early childhood special education: Redefining best practice to meet the needs of all children. In B. L. Mallory & R. S. New (Eds.), *Diversity and developmentally appropriate practices: Challenges for early childhood education* (pp. 185-201). New York: Teachers College Press.

Au, K. (1993). *Literacy instruction in multicultural settings.* Fort Worth, TX: Harcourt Brace College Publishers.

Au, K. H., & Kawakami, A. J. (1991). Culture and ownership: Schooling of minority students. *Childhood Education, 67*, 280-284.

Bailey, D. B., & McWilliams, R. A. (1990). Normalizing early intervention. *Topics in Early Childhood Special Education, 10*(2), 33-47.

Baker, J., & Zigmond, N. (1990). Are regular education classes equipped to accommodate students with learning disabilities? *Exceptional Children, 56*(6), 515-526.

Bandura, A. (1973). *Aggression: A social learning analysis.* Englewood Cliffs, NJ: Prentice-Hall.

Barbour, N. B. (1992). Early childhood gifted education: A collaborative perspective. *Journal for the Education of the Gifted, 15*(2), 145-162.

Barbour, N. H., & Seefeldt, C. (1993). *Developmental continuity across preschool and primary grades: Implications for teachers.* Olney, MD: Association for Childhood Education International.

Barclay, K., & Benelli, C. (1994). Are labels determining practice? Programming for preschool gifted children. *Childhood Education, 70*(3), 133-136.

Barone, D. (1994). Myths about "crack babies." *Educational Leadership, 52*(2), 67-68.

Beck, J., Broers, J., Hogue, E., Shipstead, J., & Knowlton, E. (1994). Strategies for functional community-based instruction and inclusion for children with mental retardation. *Teaching Exceptional Children, 26*(2), 44-48.

Ben Ari, R., & Rich, Y. (1992). Meeting the needs of all students in the heterogeneous class. In P. S. Klein & A. J. Tannenbaum (Eds.), *To be young and gifted* (pp. 348-378). Norwood, NJ: Ablex.

Benner, S. (1992). *Assessing young children with special needs: An ecological perspective.* White Plains, NY: Longman.

BEST COPY AVAILABLE

Bergen, D. (1993). Authentic performance assessments. *Childhood Education, 70*(2), 99, 102.
Berger, E. (1991). *Parents as partners in education: The school and home working together* (3rd ed.). New York: Macmillan.
Berk, L. E. (1994). *Child development* (3rd ed.). Needham Heights, MA: Allyn and Bacon.
Berman, P., Minicucci, C., McLaughlin, B., Nelson, B., & Woodworth, K. (1995). *School reform and student diversity: Case studies of exemplary practices for LEP students.* Santa Cruz, CA: The Institute for Policy Analysis and Research, in collaboration with the National Center for Research on Cultural Diversity and Second Language Learning (Washington, DC).
Bodrova, E., & Leong, D. (1996). *Tools of the mind: The Vygotskian approach to early childhood education.* Englewood Cliffs, NJ: Merrill/Prentice-Hall.
Boyer, E. L. (1991). *Ready to learn: A mandate or the nation.* Princeton, NJ: The Carnegie Foundation for the Advancement of Teaching.
Brenna, B. (1995). The metacognitive reading strategies of five early readers. *Journal of Research in Reading, 18*, 53-56.
Brewer, J. A. (1995). *Introduction to early childhood education: Preschool through primary grades* (2nd ed.). Boston: Allyn and Bacon.
Bricker, D. (1995). The challenge of inclusion. *Journal of Early Intervention, 19*(3), 179-194.
Bricker, D., & Cripe, J. J. W. (1992). *An activity-based approach to early intervention.* Baltimore: Paul H. Brookes.
Bronfenbrenner, U. (1979). *The ecology of human development.* Cambridge, MA: Harvard University Press.
Brown, F., & Lehr, D. (1993). Making activities meaningful for students with severe multiple disabilities. *Teaching Exceptional Children, 25*(4), 12-16.
Brown, J. L., & Pollitt, E. (1996). Malnutrition, poverty and intellectual development. *Scientific American, 274*(2), 38-43.
Brown, R. (1991). Policy and the rationalization of schooling. In E. H. Hiebert (Ed.), *Literacy for a diverse society: Perspectives, practices, and policies* (pp. 217-227). New York: Teachers College Press.
Buntaine, R. L., & Kundert, D. K. (1997). The effectiveness of transitional prekindergarten programs on later academic achievement. *Psychology in Schools, 34*(1), 41-49.
Buswell, B., & Schaffner, B. (1992). Building friendships—An important part of schooling. *News in Print, 4*(4), 5-9.
Buysse, V. (1993). Friendships of preschoolers with disabilities in community based child care settings. *Journal of Early Intervention, 17*(4), 380-395.
Calderon, M. (1996). Bilingual, bicultural, and binational cooperative learning communities for students and teachers. In J. L. Flores (Ed.), *Children of la frontera: Binational efforts to serve Mexican migrant and immigrant students* (pp. 203-228). Charleston, WV: ERIC Clearinghouse on Rural Education and Small Schools.
Carnegie Task Force on Learning in the Primary Grades. (1996). *Years of promise: A comprehensive learning strategy for America's children.* New York: Carnegie Corporation of New York.
Carnegie Task Force on Meeting the Needs of Young Children. (1994). *Starting points: Meeting the needs of our youngest children.* New York: Carnegie Corporation of New York.
Carta, J. J. (1994). Developmentally appropriate practices: Shifting the emphasis to individual appropriateness. *Journal of Early Intervention, 18*(4), 342-343.
Carta, J. J., Atwater, J. B., Schwartz, I. S., & Miller, P. A. (1990). Applications of ecobehavioral analysis to the study of transitions across early education settings. *Education and Treatment of Children, 13*(4), 298-315.
Carta, J. J., Greenwood, C. R., & Atwater, J. B. (1985). *Ecobehavioral system for the complex assessment of preschool environments: ESCAPE* (ERIC (ED 288 268) (EC 200 587)). Kansas City, KS: Juniper Gardens Children's Project, Bureau of Child Research, University of Kansas.
Castle, K., & Rogers, K. (1993/94). Rule-creating in a constructivist classroom community. *Childhood Education, 70*, 77-80.
Cavallaro, C. C., Haney, M., & Cabello, B. (1993). Developmentally appropriate strategies for promoting full participation in early childhood settings. *Topics in Early Childhood Special Education, 13*(3), 293-307.
Chaillé, C., & Silvern, S. B. (1996). Understanding through play. *Childhood Education, 72*(5), 274-277.
Chamot, A. U., & O'Malley, J. M. (1996). The cognitive academic language learning approach: A model for linguistically diverse classrooms. *The Elementary School Journal, 96*(3), 259-273.
Cheng, Y. C. (1994). Classroom environment and student affective performance: An effective profile. *Journal of Experimental Education, 62*(3), 221-239.
Children's Defense Fund. (1995). *The state of America's children: Yearbook 1995.* Washington, DC: Author.
Children's Defense Fund. (1997). *The state of America's children: Yearbook 1997.* Washington, DC: Author.
Clark, E. R. (1995). "How did you learn to write in English when you haven't been taught in English?" The language experience approach in a dual language program. *Bilingual Research Journal, 19*(3 & 4), 611-628.
Cole, K., Dale, P., Mills, P., & Jenkins, J. (1993). Interaction between early intervention curricula and student characteristics. *Exceptional Children, 60*(1), 17-28.
Cook, R., Tessier, A., & Klein, M. D. (1996). *Adapting early childhood curricula for children in inclusive settings* (4th ed.). Englewood Cliffs, NJ: Merrill/Prentice-Hall.
Cox, J., Daniels, N., & Boston, B. (1985). *Educating able learners.* Austin, TX: The University of Texas Press.
Crowell, C. G. (1991). Becoming biliterate in a whole language classroom. In Y. M. Goodman, W. J. Hood, & K. S. Goodman (Eds.), *Organizing for whole language* (pp. 95-111). Portsmouth, NH: Heinemann Educational Books.
Cummins, J. (1986). Empowering minority students: A framework for intervention. *Harvard Educational Review, 56*(1), 18-36.
Cummins, J. (1989). *Empowering minority students.* Sacramento, CA: California Association for Bilingual Education.
Cummins, J. (1993). Empowerment through biliteracy. In J.V. Tinajero & A.F. Ada (Eds.), *The power of two languages: Literacy and biliteracy for Spanish-speaking students* (pp. 9-25). New York: MacMillan/McGraw-Hill School Publishing.
D'Andrea, M., & Daniels, J. (1996). Promoting peace in our school: Developmental, preventive, and multicultural considerations. *The School Counselor, 44*, 55-63.

BEST COPY AVAILABLE

Darling-Hammond, L. (1996). The right to learn and the advancement of teaching: Research, policy, and practice for democratic education. *Educational Researcher, 25*(6), 5-17.
Davidman, L., & Davidman, P. (1994). *Teaching with a multicultural perspective: A practical guide.* New York: Longman.
Davis, G. A., & Rimm, S. B. (1994). *Education of the gifted and talented* (3rd ed.). Boston: Allyn and Bacon.
de Melendez, W. R., & Ostertag, V. (1997). *Teaching young children in multicultural classrooms: Issues, concepts, and strategies.* Albany, NY: Delmar.
Dean, A. V., Salend, S. J., & Taylor, L. (1993). Multicultural education: A challenge for special educators. *Teaching Exceptional Children, 26*(1), 40-43.
Deiner, P. (1993). *Resources for teaching children with diverse abilities* (2nd ed.). Fort Worth, TX: Harcourt Brace College Publishers.
Derman-Sparks, L. (1993). Revisiting multicultural education: What children need to live in a diverse society. *Dimensions of Early Childhood, 21*(2), 6-10.
Derman-Sparks, L. (1993/1994). Empowering children to create a caring culture in a world of differences. *Childhood Education, 70*(2), 66-71.
Derman-Sparks, L., & ABC Task Force. (1989). *Anti-bias curriculum: Tools for empowering young children.* Washington, DC: National Association for the Education of Young Children.
DeVries, R., & Kohlberg, L. (1987). *Programs in early education: The constructivist view.* White Plains, NY: Longman.
DeVries, R., & Zan, B. (1996). Assessing interpersonal understanding in the classroom context. *Childhood Education, 72*(5), 265-268.
Diamond, K. E., Hestenes, L. L., & O'Connor, C. D. (1994). Integrating young children with disabilities in preschool: Problems and promise. *Young Children, 54*(2), 68-75.
Division for Early Childhood of the Council for Exceptional Children. (1993). *DEC recommended practices: Indicators of quality in programs for infants and young children with special needs and their families.* Reston, VA: Author.
Division for Early Childhood of the Council for Exceptional Children, National Association for the Education of Young Children, & Association of Teacher Educators. (1995). *Personnel standards for early education and early intervention: Guidelines for licensure in early childhood special education.* Pittsburgh, PA: Division for Early Childhood Council for Exceptional Children.
Dudley-Marling, C. (1993). Challenging the children: A holistic approach to teaching students with learning problems. In A. M. Bauer & E. M. Lynch (Eds.), *Children who challenge the system* (pp. 89-115). Norwood, NJ: Ablex.
Duttweiler, P. C. (1992). Engaging at-risk students with technology. *Media & Methods, 12*, 6-8.
Eanes, R. (1997). *Content area literacy: Teaching for today and tomorrow.* Albany, NY: Delmar.
Eichinger, J., & Woltman, S. (1993). Integration strategies for learners with severe multiple disabilities. *Teaching Exceptional Children, 26*(1), 18-21.
Epstein, J. L. (1995). School/family/community partnerships: Caring for the children we share. *Phi Delta Kappan, 76*(9), 701-712.
Erikson, E. (1950/1963). *Childhood and society.* New York: W. W. Norton.
Ferguson, P., & Streib, M. M. (1996). Longitudinal outcome effects of non-at-risk and at-risk transition first grade samples: A follow-up study and further analysis. *Psychology in the Schools, 33*, 38-45.
Fern, V. (1995). Oyster school stands the test of time. *Bilingual Research Journal, 19*(3 & 4), 497-512.
Field, S., LeRoy, B., & Rivera, S. (1994). Meeting functional curriculum needs in middle school general education classrooms. *Teaching Exceptional Children, 26*(2), 40-43.
Fitton, L., & Gredler, G. (1996). Parental involvement in reading remediation with young children. *Psychology in the Schools, 33*, 325-331.
Fox, L., Hanline, M. F., Vail, C. O., & Galant, K. R. (1994). Developmentally appropriate practice: Applications for young children with disabilities. *Journal of Early Intervention, 18*(3), 243-257.
Freeman, Y., & Freeman, D. (1992). *Whole language for second language learners.* Portsmouth, NH: Heinemann Educational Books.
Frost, J. L. (1992). *Play and playscapes.* Albany, NY: Delmar.
Fuchs, L., Fuchs, D., & Hamlett, C. (1994). Strenghthening the connection between assessment and instructional planning with expert systems. *Exceptional Children, 61*(2), 138-146.
Fuchs, L., Fuchs, D., Hamlett, C., Phillips, N., & Karns, K. (1995). General educators' specialized adaptation for students with learning disabilities. *Exceptional Children, 61*(5), 440-459.
Galant, K., & Hanline, M. F. (1993). Parental attitudes toward mainstreaming young children with disabilities. *Childhood Education, 69*, 293-297.
Garcia, G. E. (1994). Equity challenges in authentically assessing students from diverse backgrounds. *The Educational Forum, 59*, 64-73.
Gargiulo, R. M., & Graves, S. B. (1991). Parental feelings: The forgotten component when working with parents of handicapped preschool children. *Childhood Education, 68*, 157-159.
Gelman, S. (1993). Innovative technology for students with disabilities. *Principal, 73*(2), 52-53.
Genishi, C., Dyson, A. H., & Fassler, R. (1994). Language and diversity in early childhood: Whose voices are appropriate? In B. L. Mallory & R. S. New (Eds.), *Diversity and developmentally appropriate practices: Challenges for early childhood education* (pp. 250-268). New York: Teachers College Press.
Gersten, R. (1996). Literacy instruction for language-minority students: The transition years. *The Elementary School Journal, 96*(3), 227-244.
Gifford, R. (1997). *Environmental psychology: Principles and practice* (2nd ed.). Boston: Allyn and Bacon.
Gonzalez, V., Brusca-Vega, R., & Yawkey, T. (1997). *Assessment and instruction of culturally and linguistically diverse students with or at-risk of learning problems: From research to practice.* Boston: Allyn and Bacon.
Gonzalez-Mena, J. (1997). *Multicultural issues in child care* (2nd ed.). Mountain View, CA: Mayfield Publishing Company.
Goodman, D., & Curry, T. K. (1991). Teaching in the real world. In Y. M. Goodman, W. J. Hood, & K. S. Goodman (Eds.),

BEST COPY AVAILABLE

Organizing for whole language (pp. 137-169). Portsmouth, NH: Heinemann Educational Books.
Gottfried, A. W. (1984). Home environment and early cognitive development. *Journal of Educational Research, 1*(4), 122-134.
Grace, C. A. (1993). A model program for home-school communication and staff development. In K. M. Christensen & G. L. Delgado (Eds.), *Multicultural issues in deafness* (pp. 29-41). White Plains, NY: Longman.
Greaney, V. (1987). Factors related to amount and type of leisure time reading. *Reading Research Quarterly, 14*(3), 340-351.
Greenwood, C. (1994). Advances in technology-based assessment within special education. *Exceptional Children, 61*(2), 102-104.
Greenwood, C., Carta, J., Kamps, D., Terry, B., & Delquadri, J. (1994). Development and validation of standard classroom observation systems for school practitioners: Ecobehavioral assessment systems software (EBASS). *Exceptional Children, 61*(2), 197-210.
Greenwood, C., & Rieth, H. (1994). Current dimesions of technology-based assessment in special education. *Exceptional Children, 61*(2), 105-113.
Griffith, J. (1996). Relation of parental involvement, empowerment, and school traits to student academic performance. *The Journal of Educational Research, 90*(1), 33-41.
Gross, M. U. M. (1992). The early development of three profoundly gifted children of IQ 200. In P. S. Klein & A. J. Tannenbaum (Eds.), *To be young and gifted* (pp. 94-138). Norwood, NJ: Ablex.
Gudykunst, W., & Kim, Y. (1992). *Communicating with strangers: An approach to intercultural communication* (2nd ed.). New York: McGraw-Hill.
Guralnick, M. J. (1983). Fundamental issues in preschool mainstreaming in early education. In J. Anderson & T. Black (Eds.), *Mainstreaming in early education* (Vol. 2, pp. 1-19). Chapel Hill, NC: U.S. Department of Education.
Guralnick, M. J. (1993). Developmentally appropriate practice in the assessment and intervention of children's peer relations. *Topics in Early Childhood Special Education, 13*(3), 344-371.
Hamre-Nietupski, S., Hendrickson, J., Nietupski, J., & Sasso, G. (1993). Perceptions of teachers of students with moderate, severe, or profound disabilities on facilitating friendships with nondisabled peers. *Education and Training in Mental Retardation, 28*(2), 111-127.
Hanline, M. F., & Fox, L. (1993). Learning within the context of play: Providing typical early childhood experiences for children with severe disabilities. *The Journal of the Association for Persons with Severe Handicaps, 18*(2), 121-129.
Hartly, E. A., & Johnson, P. (1995). Toward a community-based transition to a yup'ik first language (immersion) program with ESL component. *Bilingual Research Journal, 19*(3 & 4), 571-585.
Helmke, L., Havekost, D., Patton, J., & Polloway, E. (1994). Life skills programming: Development of a high school science course. *Teaching Exceptional Children, 26*(2), 49-53.
Hendrick, J. (1998). *Total learning: Developmental curriculum for the young child* (5th ed.). Upper Saddle River, NJ: Merrill.
Hendrick, J., & Stange, T. (1991). Do actions speak louder than words? An effect of the functional use of language on dominant sex role behavior in boys and girls. *Early Childhood Research Quarterly, 6*(4), 565-576.
Hertzog, N. B. (1998). Gifted education specialist. *Teaching Exceptional Children, 30*(3), 39-43.
Hewit, J. S., & Whittier, K. (1997). *Teaching methods for today's schools: Collaboration and inclusion.* Boston: Allyn and Bacon.
Holder-Brown, L., & Parrette, H., Jr. (1992). Children with disabilities who use assistive technology: Ethical considerations. *Young Children, 47*(6), 73-77.
Holzburg, C. (1994). Technology in special education. *Technology & Learning, 18*(7), 18-21.
Hoot, J. L., Parmar, R. S., Hujala-Huttunen, E., Cao, Q., & Chacon, A. M. (1996). Cross-national perspectives on developmentally appropriate practices for early childhood programs. *Journal of Research in Childhood Education, 10*(2), 160-169.
Iran-Nejad, A., & Marsh, G. E., II. (1994). Discovering the future of education. *Education, 114*(2), 249-256.
Irvin, L., & Walker, H. (1994). Assessing children's social skills using video-based microcomputer technology. *Exceptional Children, 61*(2), 182-196.
Jimerson, S., Carlson, E., Rotert, M., Egeland, B., & Sroufe, L. A. (1997). A prospective longitudinal study of the correlates and consequences of early grade retention. *Journal of School Psychology, 35*(1), 3-23.
Johnson, J. E., & Johnson, K. M. (1994). The applicability of developmentally appropriate practice for children with diverse abilities. *Journal of Early Intervention, 18*(4), 343-346.
Joint Committee on Teacher Planning for Students with Disabilities. (1995). *Planning for academic diversity in America's classrooms: Windows on reality, research, change, and practice.* Lawrence, KS: The University of Kansas Center for Research on Learning.
Jorgenson, C. M. (1994/95). Essential questions—inclusive answers. *Educational Leadership, 52*(4), 52-55.
Katz, L. G., & Chard, S. C. (1989). *Engaging children's minds: The project approach.* Norwood, NJ: Ablex.
Kindsvatter, R., Wilen, W., & Ishler, M. (1996). *Dynamics of effective teaching* (3rd ed.). White Plains, NY: Longman.
Klein, P. S. (1992). Mediating the cognitive, social, and aesthetic development of precocious young children. In P. S. Klein & A. J. Tannenbaum (Eds.), *To be young and gifted* (pp. 245-277). Norwood, NJ: Ablex.
Koplow, L. (1996a). Play therapy as early intervention. In L. Koplow (Ed.), *Unsmiling faces: How preschools can heal* (pp. 75-88). New York: Teachers College Press.
Koplow, L. (1996b). Playing for keeps: The value of open-ended play. In L. Koplow (Ed.), *Unsmiling faces: How preschools can heal* (pp. 107-122). New York: Teachers College Press.
Krashen, S. (1982). *Principles and practice in second language acquisition.* Oxford: Oxford Pergamon.
Kugelmass, J. W. (1989). The "shared classroom": A case study of interactions between early childhood and special education staff and children. *Journal of Early Intervention, 13*(1), 36-44.
Lay-Dopyera, M., & Dopyera, J. E. (1992). Strategies for teaching. In C. Seefeldt (Ed.), *The early childhood curriculum: A*

BEST COPY AVAILABLE

review of current research (2nd ed., pp. 16-41). New York: Teachers College Press.
Lehmann, T. H. (1997, June 16, 1997). Crack the books. *The Express News*, pp. 2E.
Leone, B. (1995). A K-5 bilingual resource room: The first year. *Bilingual Research Journal, 19*(3 & 4), 551-569.
LeRoy, C., Powell, T., & Kelker, P. (1994). Meeting our responsibilities in special education. *Teaching Exceptional Children, 26*(4), 37-44.
Levin, J., & Nolan, J. F. (1996). *Principles of classroom management* (2nd ed.). Boston: Allyn and Bacon.
Linn, R., & Gronlund, N. (1995). *Measurement and assessment in teaching* (7th ed.). Englewood Cliffs, NJ: Merrill/ Prentice Hall.
Mallory, B. (1994). Inclusive policy, practice, and theory for young children with developmental differences. In B. Mallory & R. New (Eds.), *Diversity and developmentally appropriate practices* (pp. 44-61). New York: Teachers College Press.
Mallory, B. L., & New, R. S. (1994). Social constructivist theory and principles of inclusion: Challenges for early childhood special education. *The Journal of Special Education, 28*(3), 322-337.
Mantzicopoulos, P. Y. (1997). Do certain groups of children profit from early retention? A follow-up study of kindergartners with attention problems. *Psychology in the Schools, 34*(2), 115-127.
Mastropieri, M., & Scruggs, T. (1995). Teaching science to students with disabilities in general education settings: Practical and proven strategies. *Teaching Exceptional Children, 27*(4), 10-13.
McBride, S. L., Brotherson, M. J., Joanning, H., Whiddon, D., & Demmitt, A. (1993). Implementation of family-centered services: Perceptions of families and professionals. *Journal of Early Intervention, 17*(4), 414-430.
McIntosh, R., Vaughn, S., Schumm, J., Haager, D., & Lee, O. (1994). Observations of students with learning disabilities in general education classrooms. *Exceptional Children, 60*(3), 249-261.
McLean, M. E., & Odom, S. L. (1993). Practices for young children with and without disabilities: A comparison of DEC and NAEYC identified practices. *Topics in Early Childhood Education, 13*(3), 274-292.
Means, B., & Olson, K. (1994). Tomorrow's schools: Technology and reform in partnership. In B. Means (Ed.), *Technology and education reform: The reality behind the promise* (pp. 191-222). San Francisco: Jossey-Bass.
Medina, S. L. (1995). K-6 bilingual programs in the Los Angeles metropolitan area. *Bilingual Research Journal, 19*(3 &4), 629-640.
Miller, R. (1996). *The developmentally appropriate inclusive classroom in early education.* Albany, NY: Delmar.
Mindes, G., Ireton, H., & Mardell-Czudnowski, C. (1996). *Assessing young children.* Albany, NY: Delmar.
Montessori, M. (1912/1964). *The Montessori method.* New York: Schocken Books.
Morrison, G. S. (1998). *Early childhood education today* (7th ed.). Upper Saddle River, NJ: Merrill.
Moss, E. (1992). Early interactions and metacognitive development of gifted preschoolers. In P. S. Klein & A. J. Tannenbaum (Eds.), *To be young and gifted* (pp. 278-318). Norwood, NJ: Ablex.
National Association of State Boards of Education Study Group on Special Education. (1992). *Winners all: A call for inclusive schools.* Alexandria, VA: National Association of State Boards of Education.
National Association of State Directors of Special Education. (1995). *Deaf and hard of hearing students educational service guidelines.* Alexandria, VA: Author.
National Coalition of Advocates for Students. (1991). *The good common school: Making the vision work for all children.* Boston, MA: Author.
National Coalition of Advocates for Students. (1994). *Delivering on the promise: Positive practices for immigrant students.* Boston, MA: Center for Immigrant Students, NCAS.
New, R. S., & Mallory, B. L. (1994). Introduction: The ethic of inclusion. In B. L. Mallory & R. S. New (Eds.), *Diversity and developmentally appropriate practices: Challenges for early childhood education* (pp. 1-13). New York: Teachers College Press.
Newsome, D. L. (1996). A paradigm for restructuring elementary schools: How technology can lead the way. *TechTrends, 41*(2), 31-33.
Nieto, S. (1993). We speak in many tongues: Language diversity and multicultural education. In J.V. Tinajero & A.F. Ada (Eds.), *The power of two languages: Literacy and biliteracy for Spanish-speaking students* (pp. 37-48). New York: Macmillan/McGraw-Hill School Publishing.
Notari-Syverson, A., & Shuster, S. (1995). Putting real-life skills into IEP/IFSPs for infants and young children. *Teaching Exceptional Children, 27*(2), 29-32.
Oddone, A. (1993). Inclusive classroom applications. *Teaching Exceptional Children, 26*, 74-75.
Olsen, L. (1994). *The unfinished journey: Restructuring schools in a diverse society.* San Francisco: California Tomorrow.
O'Neil, J. (1992). "Constructivism" posits new conception of learning. *Association for Supervision and Curriculum Development Update, 34*, 4.
Ovando, C. J. (1997). Language diversity and education. In J. A. Banks & C. A. M. Banks (Eds.), *Multicultural education: Issues and perspectives* (3rd ed., pp. 272-296). Boston: Allyn and Bacon.
Parette, H. P., Jr., Hourcade, J. J., & VanBiervliet, A. (1993). Selection of appropriate technology for children with disabilities. *Teaching Exceptional Children, 26*, 18-22.
Passow, A. H. (1994). Growing up gifted and talented: Schools, families and communities. *Gifted Education International, 10*(1), 4-9.
Peck, C. A. (1993). Ecological perspectives on the implementation of integrated early childhood programs. In C. A. Peck, S. L. Odom, & D. D. Bricker (Eds.), *Integrating young children with disabilities into community programs: Ecological perspectives on research and implementation* (pp. 3-15). Baltimore: Paul H. Brookes.
Perez, B. (1996). Instructional conversations as opportunities for English language acquisition for culturally and linguistically diverse students. *Language Arts, 73*, 173-181.
Perez, S. (1994). Responding differently to diversity. *Childhood Education, 70*(3), 151-153.
Perry, P. J., & Hoback, J. R. (1984). Grid planning: A tool in programming for talented and gifted students. *Roeper Review, 6*(3), 139-142.
Peterson, C. A., & McConnell, S. R. (1993). Factors affecting the impact of social interaction skills interventions in early

BEST COPY AVAILABLE

childhood special education. *Topics in Early Childhood Special Education, 13*(1), 38-56.
Piaget, J. (1952). *The origins of intelligence in children.* New York: International Universities Press.
Piaget, J. (1962). *Play, dreams and imitation in childhood.* New York: W. W. Norton.
Polloway, E. A., & Patton, J. R. (1997). *Strategies for teaching learners with special needs* (6th ed.). New York: Merrill/Macmillan.
Poplin, M. S. (1993). Making our whole-language bilingual classrooms also liberatory. In I. J. V. Tinajero & A. F. A. Eds. (Eds.), *The power of two languages: Literacy and biliteracy for Spanish-speaking students* (pp. 58-67). New York: Macmillan/McGraw-Hill School Publishing Company.
Pressley, M., Brown, R., Ell-Dinary, P. B., & Afflerbach, P. (1995). The comprehension instruction that students need: Instruction fostering activity constructively responsive reading. *Learning Disabilities Research & Practice, 10*(4), 215-224.
Repetto, J. B., & Correa, V. I. (1996). Expanding views on transition. *Exceptional Children, 62*(6), 551-563.
Richarz, S. (1993). Innovations in early childhood education: Models that support the integration of children of varied developmental levels. In C. Peck, S. Odom, & D. Bricker (Eds.), *Integrating young children with disabilities into community programs: Ecological perspectives on research and implementation* (pp. 83-107). Baltimore: Paul H. Brookes.
Roberson, T. G. (1984). Curriculum design for the gifted. *Roeper Review, 6*(3), 137-145.
Rosenthal, D. M., & Sawyers, J. Y. (1996). Building successful home/school partnerships: Strategies for parent support and involvement. *Childhood Education, 72*, 194-200.
Ryba, K., Selby, L., & Nolan, P. (1995). Computers empower students with special needs. *Educational Leadership, 52*(2), 82-84.
Sadker, M., & Sadker, D. (1994). *Failing at fairness: How America's schools cheat girls.* New York: Charles Scribner's Sons.
Safford, P. L. (1989). *Integrated teaching in early childhood: Starting in the mainstream.* White Plains, NY: Longman.
Salend, S. J., & Taylor, L. (1993). Working with families: A cross-cultural perspective. *Remedial and Special Education, 14*(5), 25-32.
Salisbury, C. (1991). Mainstreaming during the early childhood years. *Exceptional Children, 58*(2), 146-155.
Sapona, R., & Phillips, L. (1993). Classrooms as communities of learners: Sharing responsibility for learning. In A. M. Bauer (Ed.), *Children who challenge the system* (pp. 63-87). Norwood, NJ: Ablex.
Saracho, O. N., & Spodek, B. (1995). Preparing teachers for early childhood programs of linguistic and cultural diversity. In E. E. Garcia, B. McLaughlin, B. Spodek, & O. N. Saracho (Eds.), *Meeting the challenge of linguistic and cultural diversity in early childhood education* (Vol. 6, pp. 154-169). New York: Teachers College Press.
Schauber, H., Morissette, P., & Langlois, L. (1995). The second language component of primary French immersion programs in Montreal, Quebec, Canada. *Bilingual Research Journal, 19*(3 & 4), 525-536.
Schloss, P. J., & Smith, M. A. (1994). *Applied behavior analysis in the classroom.* Boston: Allyn and Bacon.
Schumm, J., & Vaughn, S. (1991). Making adaptations for mainstreamed students: General classroom teachers' perspectives. *Remedial and Special Education, 12*(4), 15-24.
Schumm, J. S., Vaughn, S., Haager, D., McDowell, J., Rothlein, L., & Saumell, L. (1995). General education teacher planning: What can students with learning disabilities expect? *Exceptional Children, 61*(4), 335-352.
Schweinhart, L. J., Barnes, H. V., & Weikart, D. P. (1993). *Significant benefits: The High/Scope Perry Preschool study through age 27* (Monograph 10). Ypsilanti, MI: High/Scope Educational Research Foundation.
Scruggs, T., & Mastropieri, M. (1993). Current approaches to science education: Implications for mainstream instruction of students with disabilities. *Remedial and Special Education, 14*(1), 15-24.
Sears, S., Carpenter, C., & Burstein, N. (1994). Meaningful reading instruction for learners with special needs. *The Reading Teacher, 47*(8), 632-638.
Seefeldt, C. (1997). *Social studies for the preschool-primary child* (5th ed.). Upper Saddle River, NJ: Merrill/Prentice Hall.
Shepard, L. A. (1997). Children not ready to learn? The invalidity of school readiness testing. *Psychology in the Schools, 34*(2), 85-97.
Shumow, L., Kang, K., & Vandell, D. L. (1996). School choice, family characteristics, and home-school relations: Contributions to school achievement? *Journal of Educational Psychology, 88*(3), 451-460.
Smith, G. J., Edelen-Smith, P. J., & Stodden, R. A. (1995). How to avoid the seven pitfalls of systematic planning: A school and community plan for transition. *Teaching Exceptional Children, 27*(4), 42-47.
Sontag, J. C., & Schacht, R. (1993). Family diversity and patterns of service utilization in early intervention. *Journal of Early Intervention, 17*(4), 431-444.
Sosa, A. (1993). *Thorough and fair: Creating routes to success for Mexican-American students.* Charleston, WV: ERIC Clearinghouse on Rural Education and Small Schools.
Sosa, A. S. (1996). Involving hispanic parents in improving educational opportunities for their children. In J. L. Flores (Ed.), *Children of la frontera: Binational efforts to serve Mexican migrant and immigrant students* (pp. 341-352). Charleston, WV: ERIC Clearinghouse on Rural Education and Small Schools.
Soto, L. D. (1991). Understanding bilingual/bicultural young children. *Young Children, 46*(2), 30-36.
Stainback, W., Stainback, S., & Stefanich, G. (1996). Learning together in inclusive classrooms. *Teaching Exceptional Children, 28*(3), 14-19.
Stufflebeam, D. L. (1967). The use and abuse of evaluation in Title III. *Theory Into Practice, 6*(3), 126-133.
Stufflebeam, D. L. (1971). The use of experimental design in education. *Journal of Educational Measurement, 8*(4), 267-274.
Tannenbaum, A. J. (1992). Early signs of giftedness: Research and commentary. In P. S. Klein & A. J. Tannenbaum (Eds.), *To be young and gifted* (pp. 3-32). Norwood, NJ: Ablex.
Tanner, C. K., & Galis, S. A. (1997). Student retention: Why is there a gap between the majority of research findings and school practice? *Psychology in the Schools, 34*(2), 107-113.

BEST COPY AVAILABLE

Teachers of English to Speakers of Other Languages Inc. (1995a). TESOL standards ensuring access to quality educational experiences for language minority students. *Bilingual Research Journal, 19*(3 & 4), 671-674.

Teachers of English to Speakers of Other Languages Inc. (1995b). TESOL statement on the role of bilingual education in the education of children in the United States. *Bilingual Research Journal, 19*(3 &4), 661-669.

Trawick-Smith, J. W. (1997). *Early childhood development: A multicultural perspective*. Upper Saddle River, NJ: Merrill/ Prentice Hall.

Udvari-Solner, A., & Thousand, J. (1995). Promising practices that foster inclusive education. In R. A. Villa & J. S. Thousand (Eds.), *Creating an inclusive school* (pp. 87-109). Alexandria, VA: Association for Supervision and Curriculum Development.

Underwood, J. K., & Mead, J. F. (1995). *Legal aspects of special education and pupil services*. Boston: Allyn and Bacon.

U.S. Department of Education. (1993). *National excellence: A case for developing America's talent*. Washington, DC: Author.

Vygotsky, L. (1978). *Mind in society: The development of higher psychological functions*. Cambridge, MA: Harvard University Press.

Walker, S. (1993/1994). Parenting talented children and adolescents. *The Journal of Secondary Gifted Education, 5*(2), 36-43.

Wang, M. C. (1989). Adaptive instruction: An alternative for accommodating student diversity through the curriculum. In D. K. Lipsky & A. Gartner (Eds.), *Beyond separate education: Quality education for all* (pp. 99-119). Baltimore: Paul H. Brookes.

Wang, M. C., Haertel, G. D., & Walberg, H. J. (1993/94). What helps students learn? *Educational Leadership, 51*(4), 74-79.

Webster, A., Beveridge, M., & Reed, M. (1996). Conceptions of literacy in primary and secondary school teachers. *Journal of Research in Reading, 19*, 36-45.

Weinberger, J. (1996). A longitudinal study of children's early literary experiences at home and later literacy development in home and school. *Journal of Research in Reading, 19*, 14-24.

Weinstein, C. S. (1979). The physical environment of the school: A review of the research. *Review of Educational Research, 49*(4), 577-610.

Widerstrom, A. H. (1986). Educating young handicapped children: What can early childhood education contribute? *Childhood Education, 63*, 78-83.

Williams, L. R. (1992). Determining the curriculum. In C. Seefeldt (Ed.), *The early childhood curriculum: A review of current research* (2nd ed., pp. 1-15). New York: Teachers College Press.

Williams, L. R. (1994). Developmentally appropriate practice and cultural values: A case in point. In B. L. Mallory & R. S. New (Eds.), *Diversity and developmentally appropriate practices: Challenges for early childhood education* (pp. 155-165). New York: Teachers College Press.

Winter, S. M. (1997). "SMART" planning for inclusion. *Childhood Education, 73*, 212-218.

Winter, S. M., Bell, M., & Dempsey, J. (1994). Creating play environments for children with special needs. *Childhood Education, 71*, 28-32.

Winter, S. M., & Van Reusen, A. K. (1997). Inclusion and kindergartners who are deaf or hard of hearing: Comparing teaching strategies with recommended guidelines. *Journal of Research in Childhood Education, 11*, 114-134.

Winter, S. M., & Van Reusen, A. K. (1998). Unpublished data collection.

Winton, P. J. (1993). Providing family support in integrated settings: Research and recommendations. In C. A. Peck, S. L. Odom, & D. D. Bricker (Eds.), *Integrating young children with disabilities into community programs: Ecological perspectives on research and implementation* (pp. 65-80). Baltimore: Paul H. Brookes.

Wolery, M. (1991). Instruction in early childhood special education: "Seeing through a glass darkly . . . knowing in part." *Exceptional Children, 58*(2), 127-135.

Wolery, M., & Bredekamp, S. (1994). Developmentally appropriate practices and young children with disabilities: Contextual issues in the discussion. *Journal of Early Intervention, 18*(4), 331-341.

Wolf, D. P., LeMahieu, P., & Eresh, J. (1992). Good measure: Assessment as a tool for educational reform. *Educational Leadership, 49*(8), 8-13.

Wong-Fillmore, L. (1991). Language and cultural issues in early education. In S. L. Kagan (Ed.), *The care and education of America's young children: Obstacles and opportunities* (pp. 30-49). Chicago: National Society for the Study of Education.

Woodruff, G. (1994). Serving the needs of children with AIDS and their families: A case for comprehensive community-based and family-centered programs. *Teaching Exceptional Children, 26*(4), 45-48.

Wright, L., & Borland, J. (1993). Using early childhood developmental portfolios in the indentification and education of young, economically disadvantaged, potentially gifted students. *Roeper Review, 15*(4), 205-210.

York, S. (1991). *Roots and wings: Affirming culture in early childhood programs*. St. Paul, MN: Redleaf Press.

Zucker, C. (1995). The role of ESL in a dual language program. *Bilingual Research Journal, 19*(3 & 4), 513-523.

BEST COPY AVAILABLE

Part 2

Implementation of the Model

CHAPTER 3

The Socio-Organizational Climate

KEY QUESTIONS

- *What are the two major goals for planning the socio-organizational climate?*
- *How does acquiring cultural competence help teachers support young children's social and emotional development?*
- *How is "discipline" defined, and why is a discipline plan critical?*
- *How are multicultural education and conflict resolution related?*
- *What steps can teachers take to prevent problem behavior?*
- *How can teachers involve families when early intervention is needed?*
- *How can teachers provide a therapeutic environment for all children?*

CREATING A POSITIVE ATMOSPHERE FOR LEARNING

When diverse young children are grouped together, their behavioral milieu is rich, varied, and often complex. Some children may be docile and well-adjusted, while others may display aggressive tendencies or injurious behavior. Children who have experienced personal trauma or violence may withdraw, while others play with carefree exuberance. Teachers who are ill-prepared may find perplexing the kaleidoscopic social and emotional atmosphere often found in inclusive settings. At times, even well-prepared teachers may find managing such behavioral extremes daunting. On the other hand, a full palette of behaviors can offer children opportunities to learn prosocial and coping skills that prepare them for a behaviorally complex world. When teachers understand how to support and enhance children's affective development, they can help children make the best use of the varied opportunities offered in an inclusion setting.

The ECI Model targets two major goals in order to create a socio-organizational structure that includes all children: 1) To prevent problem behavior by supporting the social and emotional development of each child, and 2) To focus on early identification and intervention for children who are at risk or exhibit problem behavior.

ECI programs strive to prevent problem behavior by strongly promoting children's social and emotional development. Supporting children's overall development enhances children's potential for current and future success. A child's self-concept, self-esteem, and sense of identity affect all other domains of development. Furthermore, development of prosocial skills affects children's ability to form satisfying relationships with family members and to collaborate productively with peers. Consequently, ECI programs ensure that programmatic structures, the physical environment, and teaching practices promote children's social and emotional development.

The second goal recognizes that young children's behavioral and emotional problems can present serious obstacles to their inclusion in early childhood settings. Problem behaviors can limit children's opportunities for learning and social interaction. As a result, all aspects of children's growth and development may suffer. Additionally, these behavioral and emotional problems are often a source of stress at home, interfering with children's development of relationships with parents and other family members.

Because many severe behavioral problems start during early childhood, identification and intervention during these years is critical. If intervention is not forthcoming during these early years, behavioral problems tend to worsen. Persistent behavioral problems are more difficult to manage, and they place a child at greater risk of school failure and social exclusion (Hunt, Mayette, Feinberg, & Baglin, 1994). Reportedly, children with identified behavioral disorders are more likely than children with any other condition to be educated in a segregated setting (Hardman, Drew, & Egan, 1996). These facts underscore the need for prevention and effective intervention during the early years, to increase the possibilities for inclusion in general education settings.

SUPPORTING CHILDREN'S SOCIAL AND EMOTIONAL DEVELOPMENT

Supporting young children's social and emotional development is an ongoing process that is fundamental to ECI programs. Opportunities for social interaction and emotional growth are integrated into daily activities. The following sections discuss the kinds of approaches and techniques that can be used to create a socio-organizational climate that supports the social and emotional development of diverse groups of young children, and that can prevent the development of problem behavior.

Match the Socio-organizational Climate to Children's Characteristics

The social-organizational climate refers to how teachers organize and manage the learning environment. The daily routines, procedures, and expectations for behavior that teachers communicate to children all directly influence time for learning. This social-organizational climate, however, does not exert an independent influence on children. It interacts with the physical components of the learning environment and with children's individual characteristics. The synergistic relationship that is created among these factors ultimately affects children's behaviors and learning (Gifford, 1997).

Continuously assess socio-emotional development. Ongoing evaluation of each child's social and emotional development is critical in planning a supportive socio-organizational climate. Teachers in ECI programs collect information about children's social skills and emotional development from a variety of sources. Collaboration with families, a valuable source of data, is vital (Bischoff, 1994).

Understanding the social and cultural dynamics of the community helps teachers view children's socio-emotional development within their natural socio-cultural contexts. Teachers in ECI programs, however, know that global assumptions about cultural groups are no substitute for understanding each family's unique expectations and concerns regarding their children. Consequently, ECI teachers establish effective lines of communication with families in order to foster collaboration and encourage family participation in assessment and programming. During such collaborations, teachers and families can use assessment data to set realistic, attainable social and behavioral goals for individual children (Lynch, 1992; Lynch & Hanson, 1992).

Systematic observations using continuous recording, time sampling, or event sampling help teachers and families to evaluate children's behaviors in authentic contexts (Wittmer, Doll, & Strain, 1996). Observational data also can inform the collaborative planning of professionals and parents seeking ways to support the socio-emotional development and learning of culturally and linguistically diverse young children (Rothenberg & Cassant, 1996).

Planning the social-organizational framework of the ECI program's learning environment is vital. An organizational structure that is well-matched to children's individual needs supports socio-emotional and cognitive development. When management strategies are responsive to the socio-cultural dynamics of families and the

community, learning environments become more effective (Freiberg & Driscoll, 1996). If safety and comfort are ensured, children will be free to take risks and learn critical skills.

Focus on preventing problem behavior. Matching the socio-organizational structure to children's characteristics is a critical step in preventing occasional problem behavior from evolving into a pattern. Prevention-focused programs lessen the chance that children will develop problem behaviors that will interfere with their learning. For instance, teaching adaptive social and communication skills can help children express their needs and resolve problems more effectively. Changing the environment or modifying the curriculum can help children acquire behaviors that are more conducive to learning and that promote their social acceptance among their peers. A social and organizational structure that is carefully matched to individual children may prevent the future use of more intrusive measures, such as segregated settings or potentially harmful psychotropic medications (Wolery & Fleming, 1992).

A strong emphasis on preventing problem behavior is more efficient than attempting to change established behavioral patterns. Consequently, teachers in ECI programs seek ways to promote positive socio-emotional growth and development. Many of the strategies for organizing and managing ECI classrooms serve a dual purpose. First, these strategies facilitate children's learning by providing a framework that helps them organize and control experiences. Second, organizational and management strategies help prevent problem behavior by fostering engagement in activities and the development of prosocial skills (Kostelnik, Stein, Whiren, & Soderman, 1998; Wolery & Fleming, 1992).

Recognize strengths and challenge each child. Recognizing children's strengths is key to providing appropriate kinds of support and levels of challenge. Identifying these strengths, however, is not a simple task, particularly when children are widely diverse. Teachers need to be knowledgeable, culturally competent, and prepared to recognize a full range of learning differences. Without such preparation, teachers may fail to recognize, or they may misinterpret, behaviors. For instance, the precocity of exceptionally gifted children often is misunderstood by teachers. When asked a question, a profoundly gifted child may find it difficult to respond. These children frequently see such an array of possible meanings and ways to view the question that a simple response seems untenable. They analyze questions from many different perspectives and have a greater fund of knowledge to inform their answers. Asking these children to give step-by-step explanations for how they arrived at an answer is also problematic. Gifted children often are able to grasp a concept rapidly and holistically. Subsequently, they are highly motivated to move forth and tackle new challenges. Step-by-step approaches to learning and practice can be cumbersome and frustrating for them. It is easy to see how teachers may misinterpret these difficulties and, consequently, underestimate gifted children's talents. Unfortunately, even when exceptional talents are recognized, they often become "invisible" when teachers who are not trained to accommodate their needs leave them to their own devices and provide little support for their efforts (Lovecky, 1994).

Failure to recognize gifted children's strengths can mean that these children will

lack the support they need for healthy social and emotional development. Gifted children often are bored when educational settings fail to recognize their abilities or provide sufficient challenges (Gallagher, Harradine, & Coleman, 1996). Although these children have amazing potential for social leadership, they may be taunted by jealous or misunderstanding peers (Hensel, 1991; Kitano, 1989).

Research shows that gifted children can be perfectionists, highly sensitive, self-critical, easily frustrated, excitable, and intense. Helping gifted children cope with this range of emotions and sensitivities can be stressful for teachers and parents (Kitano, 1989; Piirto, 1995; Tucker & Hafenstein, 1997). Consequently, gifted children and their families can benefit from the support of sensitive teachers, counselors, and specialists in gifted education. By employing a team approach, ECI programs help guide the social and emotional development of gifted children and provide them with an array of enriching experiences. Families are also the focus of services from multidisciplinary support teams. Teachers and specialists can offer moral support and reinforce parents' efforts to nurture their children's talents (Kitano, 1989; Moon, 1995; Moon, Kelly, & Feldhusen, 1997; Wolfle, 1989).

With regard to children with disabilities, some teachers focus on children's disabilities rather than on their areas of strength. Children with cerebral palsy, learning disabilities, and those who are deaf or hard of hearing may be quite gifted, yet their talents are difficult to recognize. Helen Keller exemplifies such children (Hardman et al., 1996; Rittenhouse & Blough, 1995). By assuming that children with disabilities have talents, and by adapting assessments to accommodate their disabilities, these children's strengths can be recognized (Rittenhouse & Blough, 1995).

Recognizing and developing girls' strengths and talents is especially important to their socio-emotional development and chances for success. Teachers in ECI programs encourage families to hold high expectations, give children of both sexes equal responsibilities, and avoid overprotecting young girls. Research indicates that girls need extra support to recognize their own abilities, especially in math and science. Exposure to female role models through children's literature, media, and mentors is one way to support their talents (American Association of University Women, 1991; Hardman et al., 1996). In diverse, multicultural communities, it is also critical to consider the interrelatedness of variables, such as race and gender. Children whose racial or cultural groups are more oppressive to women can mirror these sentiments in educational settings (Pollard, 1996). Vigilence is needed to ensure that equal opportunities for success are given to children of both genders.

Acquire cultural competence. Recognizing and supporting children's strengths requires cultural competence. Culturally competent teachers are aware of their personal biases, have developed cultural awareness, and operate from a sense of social responsibility. Teachers who are culturally competent are more likely to infuse multicultural education into the curriculum in an effort to increase the relevance of learning for culturally diverse children. They also are more likely to use assessments and teaching strategies that are culturally sensitive and fair (Ford, Grantham, & Harris, 1996). In addition, culturally competent teachers are more likely to recognize the strengths of culturally diverse children (Clark, 1993).

It is well-documented that the abilities of culturally and linguistically diverse children, and of those who are socioeconomically disadvantaged, often go unrecognized. These children are underrepresented in gifted programs across the United States, despite the country's increasing cultural diversity (Baldwin, 1994; Barkan & Bernal, 1991; Scott, Deuel, Jean-Francois, & Urbano, 1996; Strom, Johnson, Strom, & Strom, 1992; Tomlinson, Callahan, & Lelli, 1997). When teachers fail to recognize and challenge these children, their potential remains unnurtured. Equally damaging, their social and emotional development suffer (Ford, 1994). By recognizing their abilities, teachers can provide appropriate challenges to these children and support for their families (Baldwin, 1994; Barkan & Bernal, 1991; Ford, 1994; Strom et al., 1992).

Develop an effective management style. Fifty years of accumulated research indicates that school restructuring efforts ought to focus more attention on improving teacher performance, rather than relying on the reform of school policies. It appears that components of the social-organizational climate that directly affect children, such as management styles, social interactions of teachers with children, and the quality of instruction, have a greater impact on children's success in learning than do school policies (Wang, Haertel, & Walberg, 1993/94). For example, one study explored the complex relationship between children's affective behaviors and the learning environment. Studying classrooms in Hong Kong, Cheng (1994) found a high correlation between children's affective behaviors and the teachers' management styles. Desirable affective behaviors associated with learning were found when teachers demonstrated care for students and used rewards to encourage appropriate behaviors, rather than using coercion to force compliance (Cheng, 1994). Interestingly, this approach describes the kind of management style that has been highly recommended for early childhood teachers (Bredekamp, 1987; Marion, 1995; Miller, 1996). Cheng's findings suggest that the management style of teachers, including their leadership and use of power with children, should be studied as a possible predictor of children's affective performance and learning.

Expertise in establishing a nurturing and supportive socio-emotional environment for children is critical for teachers in ECI programs. To achieve the goals of inclusion, attention to children's affective development must be as conscientious as the planning for cognitive and academic development.

Develop a Discipline Plan

Some in the early childhood field would argue that the term "discipline" is surrounded by negative connotations and associated with punishment. While the term "guidance" is usually preferred, it does not allay confusion entirely (Gartrell, 1994). The term "discipline" is not synonymous with either the term "guidance" or the term "punishment." Discipline is a form of teaching that informs children about appropriate behaviors and helps children to gain self-control (Deiner, 1993). Teachers planning the socio-organizational structure of an ECI program adhere to the latter definition of discipline. A convergent approach to discipline, in which guidance techniques are used as a foundational set of strategies, is recommended.

Employ differentiated strategies. A basic tenet of inclusion is the recognition

that children are individuals with various abilities, characteristics, and preferences. Consequently, children are likely to respond differently to teachers' social-organizational strategies. A "one-size-fits-all" approach to guiding children's behavior fails to take into account the individual rates and patterns of children's social and emotional development. Inclusion efforts may be jeopardized unless teachers are equipped with a full palette of strategies for maintaining an effective learning environment and for fostering the development of self-esteem and self-control in each individual child. By differentiating strategies, teachers can match their guidance to individual patterns of behavior.

A discipline plan for an ECI program requires attention to both the general goals for inclusion, as outlined in the previous chapter, and the individual goals for enhancing the social and emotional development of each child in the group. The selection of strategies for organizing classrooms and guiding children's behaviors must evolve as an effort to help children meet both individual and program goals.

Schools that place children's best interests as the ultimate goal (Render, Padilla, & Krank, 1989) should, when selecting discipline methods, consider the degree of flexibility and child-centeredness those approaches afford. Consequently, rather than selecting a single approach to guidance and discipline, it is better to develop an approach that converges several methods and allows teachers the flexibility to meet children's individual needs. Each teacher can strive to develop an effective repertoire of organizational, management, and discipline strategies that are consistent with the tenets of inclusion, well-informed by research, and suited to the teacher's personality. Rather than "one-shot" inservice sessions, Wolfgang (1995) recommends providing long-term discipline training that helps teachers identify their "personality fit" with various discipline methods, and that allows for practice in using newly introduced techniques.

A number of classic discipline models that prescribe systematic approaches to managing children's behavior have been developed (Charles, 1996). Adopting a single system of discipline, however, is unlikely to afford teachers sufficient flexibility in diverse groups. Children in ECI programs frequently represent a wide range of developmental levels and intraindividual variations. Some children may display atypical developmental patterns, characterized by either the omission of typical behaviors or the addition of unexpected behaviors, such as stereotypical rocking or verbal repetition (Deiner, 1993). The cultural and linguistic diversity of the group also influences the socio-organizational dynamics. It is important to recognize that culture affects children's play activities, identity, feelings of self-worth, and their relationships with peers. Furthermore, expectations about socially appropriate behaviors are influenced by the cultural beliefs of teachers, children, and families (Trawick-Smith, 1997). Maintaining a sense of flexibility to acknowledge these differences and providing individualized support for each child's socio-emotional development are key attributes that must be sought in discipline methods.

Build from a child guidance foundation. Child guidance models of discipline, which are widely used in early childhood settings for young children, can provide a foundation for ECI discipline plans. These models of discipline recognize that in addition to temperament, children's development is a major influence on

their behavior (Kostelnik et al., 1998; Marion, 1995; Reynolds, 1996). Cognitive development is particularly crucial in the acquisition of self-control. Memory influences children's ability to retrieve and store information about behavioral expectations, rules, and consequences. Their perceptions influence their ability to focus on relevant information and remain attentively engaged in a task. As social cognition skills develop, children are better able to understand the kinds of behavioral responses that are acceptable in different circumstances (Marion, 1995). Social cognition and communication skills enable children to become more effective in resolving their conflicts and forming friendships. As language and communication skills progress, children are better able to express their desires and to understand others' verbal and nonverbal communication cues (Kostelnik et al., 1998; Prizant & Bailey, 1992; Wolery & Fleming, 1992).

Using child guidance methods, teachers can help children develop self-esteem, competence, and self-control. Child-centered methods of guidance allow teachers to enforce reasonable rules that facilitate children's development of positive self-judgment (Kostelnik et al., 1998). In ECI programs, child guidance methods encourage understanding of children's behavior and socio-emotional development from ecological and developmental perspectives. Such methods fit well with a constructivist curriculum orientation and promote individualization of strategies to fit the needs of each child.

When some children in a diverse group evidence problem behavior or atypical patterns of social and emotional development, child guidance techniques, alone, may be insufficient to foster behaviors that promote social skills and learning. Children who are at risk for, or who display symptoms of, serious behavioral problems may require additional structure or a systematic intervention keyed to their specific needs. Therefore, early intervention techniques for children with problem behavior are important (see the section on early identification and intervention on p. 108).

Avoid single system remedies. When teachers' organizational and management skills are weak, well-meaning school administrators sometimes endorse a single, "packaged" system of discipline (Wolfgang, 1995). Unfortunately, adopting a singular system for all classes in a school may eliminate opportunities for teachers in ECI programs to match the socio-organizational structure of their classroom to children's unique strengths and needs. For example, Lee Canter's Assertive Discipline approach, introduced during the mid-'70s, is still a popular system of discipline. This method, based on behavior modification techniques, rewards desired behaviors and outlines preset consequences for noncompliance that are more severe with each infraction. Teachers are encouraged to assert their control, and behavioral expectations for children are clearly specified and taught. A typical assertive discipline practice is to post a set of rules and consequences in a classroom and apply them uniformly to all children (Charles, 1996; Charles & Senter, 1995; Wolfgang, 1995). In some schools, rules and consequences are the same for each classroom across the entire school, despite differences in age or ability.

Canter's model holds a number of potential hazards for children in inclusive early childhood classrooms. This approach has been criticized as unduly harsh, encouraging teachers to exert control rather than helping children learn responsibility and

self-control (Charles, 1996; Hitz, 1988; Palardy & Rodgers, 1985). In contrast, teachers in ECI programs plan child-centered learning environments and use strategies that encourage children to develop self-control and gain independence. Teachers using assertive discipline methods establish arbitrary rules and consequences for noncompliance that are administered uniformly, regardless of children's individual traits or differences. As a result, children have no opportunity to learn from the logical consequences of their choices (Wolfgang, 1995). Teachers in ECI classrooms plan reasonable rules and limits that respect the beliefs and values of children and their families.

In the Assertive Discipline system, furthermore, authoritarian methods are used to suppress undesirable behaviors. As a result, teachers hold an adversarial position rather than a facilitative one (Charles, 1996; Gartrell, 1987). Furthermore, Assertive Discipline does not take into account mitigating factors that could influence children's behavior, such as child abuse, malnutrition, insecurity, and emotional distress (Palardy & Rodgers, 1985). Teachers recognize the influence these factors exert on children's day-to-day behavior in early childhood settings. With these problems on the rise, children are more likely to exhibit troublesome behaviors. It has been estimated that 70 percent of children's misbehavior is attributable to factors unrelated to the teacher's actions (Mendler, 1996). Assertive Discipline denies the existence of such developmental and individual differences in children (Wolfgang, 1995). Instead, the method assumes that all children are equally well-equipped to remember and exert sufficient self-control to comply with the teacher's rules and expectations. Unfortunately, this is often not the case in ECI settings where children's development varies. Self-control develops throughout childhood; children are at various developmental levels, and hence will require different levels of assistance from the teacher to foster their development of self-control.

Teachers in ECI programs strive to gain expertise in a variety of discipline techniques and strategies. While this eclectic approach can garner the most effective strategies, developing such a discipline plan depends on careful evaluation of discipline models, and on matching selected techniques to the needs of individual children.

Teachers in ECI programs are adept at evaluating discipline models and selecting strategies that fit children's needs and their own teaching style. It is important to carefully evaluate those discipline systems that were developed at a time when children's needs and accepted teaching practices differed from those of today's ECI programs. A major drawback to using Canter"s Assertive Discipline model today, for example, is that it fails to address the increasing diversity and widening span of abilities present in modern early childhood settings. Teachers using Assertive Discipline are cautioned not to accept excuses for children's misbehavior. In contrast, teachers in ECI programs understand that today's children are more likely than yesterday's to exhibit problem behaviors that are influenced by various ecological factors (Mendler, 1996).

Understand that treating children as individuals is "fair." One barrier some teachers must overcome in developing and using an eclectic approach to discipline is the common belief that treating children exactly the same is the only way to be fair (Mendler, 1996). "Fair" in an ECI classroom is matching behavioral goals,

expectations, and assistance to individual children. Expecting all children to respond similarly in every school circumstance is unrealistic, especially in light of children's diversity. Children are very accepting of true fairness that responds to their strengths and needs. When young children are immersed in a positive, accepting classroom atmosphere, they can learn that their uniqueness sometimes requires different treatment. When children feel accepted, they are very willing to be treated as individuals, and to learn to differentiate their responses to peers through teachers' modeling of fair treatment.

Create a Climate of Acceptance

Social acceptance by family, teachers, and peers influences the development of children's self-concept. Children tend to define themselves, in part, by their membership within social groups (Kondoyianni, 1997; Kostelnik et al., 1998). Consequently, ensuring that all children find acceptance is vital to each child's socio-emotional development. Moreover, fostering intercultural and anti-bias sensitivity is also critical for promoting socio-emotional growth and preventing problem behaviors.

Identify personal bias. Understanding possible sources of personal bias that may influence a teacher's practices is critical. Such personal biases affect teachers' expectations. For instance, boys are often at a disadvantage in terms of behavioral expectations; their misbehavior tends to be more noticeable and disruptive than girls' transgressions. As a result, boys are punished more frequently, especially when their teacher is female, and especially if the boys are from a minority group (Grossman & Grossman, 1994). One study found that kindergarten teachers tended to punish boys, especially those who were minorities, publicly, and in a physical manner. In contrast, girls were reprimanded, verbally or not, more privately. Furthermore, this study found evidence to suggest that the teacher's own gender-typed expectations may influence behavior. Kindergarten teachers in this study appeared to expect boys to be more aggressive and girls to be more talkative, as indicated by the teachers' higher tolerance of these behaviors (Huffine, Silvern, & Brooks, 1979). Teachers who fail to recognize their own personal biases may unconsciously reject or respond more punitively to children for reasons related to gender, culture, or minority status. The findings of one study suggest, however, that other variables, beyond teacher bias, may influence the attention teachers give children in the classroom. Primary grade teachers in the study did give boys more attention during learning activities. Interestingly, the investigators found that the boys used various strategies to secure their teachers' attention. Moreover, the teachers were so engrossed in conducting the learning activities that they were not conscious of their attention to boys and inattention to girls. The study concluded that even well-meaning teachers can be unaware of the gender imbalances that exist in their classrooms (French, 1984).

Cultural contexts also can influence the ways children are treated. A lack of cultural understanding can result in negative or unduly harsh responses to children's misbehavior. For example, European American teachers who lack cultural knowledge may misinterpret the errant behavior of African American boys, viewing the boys' actions as more hostile and less manageable compared to the aggressive acts of

European American boys (Grossman & Grossman, 1994). Research indicates that teachers tend to interact less, and more negatively, with children of minorities. Teachers spend less time encouraging and praising these children and more time criticizing or punishing them. Boys from minority groups experience harsher consequences than do girls from minority groups.

Conveying high expectations for each child's success is critical for children's self-esteem (Marion, 1995). Biases related to children's ethnicity, culture, language, gender, or program placement affect teacher perceptions of children's abilities (Sosa, 1993). Such prejudices can interfere with the communication of positive expectations. It is vital for teachers to engage in honest evaluations of their feelings and become aware of their personal biases (Derman-Sparks, 1993/1994; Derman-Sparks & ABC Task Force, 1989; York, 1991). Teachers who come to know their own beliefs, values, and sources of bias will be able to achieve a better understanding of children and their families (Serna & Patton, 1997).

Counteracting personal bias. Once prejudices are identified, teachers can begin modifying their actions to strive for fair and equitable treatment of students. Teachers can eliminate negative or poor expectations, join professional groups that value and advocate for multicultural perspectives, participate in training designed to help teachers evaluate their personal attitudes, and become acquainted with persons representing a full range of abilities, various ethnic groups, and different cultural backgrounds (Derman-Sparks, 1993/1994; Derman-Sparks & ABC Task Force, 1989; Winter, 1994/95; York, 1991, 1992).

Counteracting personal bias and gaining cultural literacy is a lifelong process. Teachers can seek information about other cultures through reading, media, and social interaction. Participating in cultural events and community celebrations can be a source of information and a way to meet new friends from different cultural backgrounds (Hyun & Fowler, 1995).

ECI teachers gear practices and strategies toward facilitation and enhancement, endeavoring to advance each child's natural abilities. Teachers can monitor their treatment of children to check for fairness. With technological devices, such as video cameras (Mann, 1994) or tape recorders, teachers can collect information about their interactions with children. Or, teachers can ask a colleague to observe and record (Grossman & Grossman, 1994). By analyzing the collected data, teachers can evaluate the fairness of their actions and practices. The amount and type of both verbal and nonverbal interactions with children can be very revealing.

Convey high expectations to all children. Children deserve teachers who convey high, yet realistically attainable, expectations of everyone (National Coalition of Advocates for Students, 1991). Research indicates that children will match the expectations of adults. Unfortunately, differences have been reported in teachers' perceptions of girls' abilities compared to boys'. Adults tend to expect a higher performance from boys in math and science. If boys do not achieve to expected levels, it is attributed to lack of effort. If girls show low performance in these subjects, however, adults attribute their lack of success to poorer ability (Sadker & Sadker, 1994).

Low expectations = Low success

A Caucasian principal of an elementary school located in a predominantly African American neighborhood leaned toward a group of visiting educators and said, "The reason these children cannot learn to read is that they have no imagination." The young children's rich, imaginative artwork adorning the hallways, however, sharply contradicted the principal's dire pronouncement. These samples clearly bespoke of the children's creativity, ability, and potential for literacy. Sadly, prejudice and lack of cultural literacy had clouded the perceptions of the administrator and teachers at this school. In view of the faculty's low expectations, the children's poor academic performance was not surprising.

A philosophy of focusing on strengths requires that teachers maintain high expectations for a child's success. Brown (1991) conducted a study of schools that purported to offer robust literacy programs to children representing diverse populations and a full range of ability levels. Brown found that low expectations prevailed in these schools. The reasons for these low expectations most often cited by subjects of the study were related to their perceptions of the children's racial characteristics or cultural heritages. Brown believes that these low expectations led to unchallenging curriculums that undermined success.

How and when a teacher gives rewards, attention, and feedback can send a strong message to children (Sosa, 1993). Planning activities that offer challenges (Sosa, 1993; Winter, Bell, & Dempsey, 1994) and providing appropriate role models are important ways to communicate high expectations (Derman-Sparks & ABC Task Force, 1989; Sosa, 1993).

Promote a diversity perspective. Children are more likely to acquire an attitude of acceptance when the social climate of the classroom fosters a diversity perspective (Winter, 1994/95). By integrating multicultural education approaches into the early childhood curriculum and practice, teachers can foster a diversity perspective (Derman-Sparks & ABC Task Force, 1989). Definitions, emphases, and approaches to multicultural education vary. Most would agree that multicultural education has broadened beyond its early focus on providing educational equity for culturally and linguistically diverse children (Winter, 1994/95). Today, multicultural education encompasses a wider breadth of human differences, including race, ethnicity, religion, gender, socio-economic status, age, ability, and family lifestyle (Banks, 1997; Dean, Salend, & Taylor, 1993; Jones & Derman-Sparks, 1992; York, 1991). Some multicultural approaches emphasize positive human relationships through social cooperation (Sleeter & Grant, 1987; York, 1991). Others stress racial and ethnic equity issues (Banks, 1993a, 1993b). Preparing children for social interaction, interdependence, and environmental responsibility within a global society is yet another approach (Begler, 1993; Cortes, 1996; Hopkins & Winters, 1990; Wooster, 1993). The anti-bias approach to multicultural education is popular in early childhood education. Reminiscent of John Dewey's teachings, the anti-bias approach incorporates democratic ideals into the classroom by involving children in planning and decision-making. Children learn to appreciate the diversity of the group and are

encouraged to act against social injustice (Derman-Sparks, 1993, 1993/1994; Derman-Sparks & ABC Task Force, 1989).

Encourage critical thinking about human rights. Infusing multicultural education into the ECI program's curriculum helps promote a diversity perspective and empowers children to advocate for their own human rights. The early childhood years, in particular, are critical for establishing children's attitudes toward gender equity. Parents and teachers serve as strong models and can convey gender-specific expectations that both boys and girls internalize, conforming their own behavior and expectations to those of their models (Grossman & Grossman, 1994). Once children have formed gender-related expectations, those beliefs are very persistent. Even when children have an opportunity to meet women and men in nonstereotypical roles, some children persist in their belief that nontraditional occupations are impossible. Boys are especially subject to stereotyping. Teachers in ECI programs promote greater equity and discourage gender segregation by encouraging mixed groups for work and play activities. When children play together in mixed groups, teachers take the opportunity to recognize and praise their cooperative efforts (Sadker, Sadker, & Long, 1997).

> ***Amanda***
>
> *Amanda, 7 years old, stormed across the playground toward her teacher. Angrily, she told Ms. Pearson that Jeffrey wouldn't let her play with the soccer balls because she is a girl. Ms. Pearson reminded Amanda that the class had talked about these issues before. "Remember, Amanda? We decided that in our classroom we wanted gender equity. That means boys and girls have the same opportunities to play." "Yeah! I have the right to play!" Amanda responded. Amanda turned and walked determinedly to where Jeffrey and the other boys were playing. With her hands on her hips, Amanda looked Jeffrey squarely in the eye and confidently said, "The teacher said I could play. So I want my 'ginger equitunity' right now!"*

While Amanda used her own terminology, she clearly demonstrated the confidence to advocate for her rights. Her teacher planned activities that engaged children in critical thinking about equity issues and prepared them for recognizing bias in future social interactions. Additionally, the teacher's reinforcement of Amanda's right to gender equity helped Amanda gain a sense of empowerment. As a result, Amanda was able to advocate for her rights, independently (Derman-Sparks, 1993/1994; Gonzalez-Mena, 1997).

Facilitate conflict resolution. A link exists between multicultural curriculum and effective conflict resolution (D'Andrea & Daniels, 1996). Multicultural education can help children better understand others' behaviors, which then may lead to the development of more effective conflict resolution skills (Davidman & Davidman, 1994; Hoveland, Peterson, & Smaby, 1996). Cross-cultural differences in values and behavior can result in conflicts between children (Gudykunst & Kim, 1992). While diversity can precipitate conflict, some experts believe that exposure to different perspectives, development of attitudes toward acceptance, and the empathy children

gain from experience in diverse groups may improve children's ability to resolve future conflicts (Davidman & Davidman, 1994; Dykeman, Daehlin, Doyle, & Flamer, 1996; Sweeney & Carruthers, 1996).

ECI teachers know that providing immediate guidance is preferable to removing children from difficult social situations. Children can learn coping skills and more appropriate ways to handle difficult circumstances within the context of the immediate situation. Through mediation, teachers can heighten children's awareness of underlying issues and guide them to a peaceable resolution (Enright & McCloskey, 1988). One study found that children who are homeless are more likely to become involved in conflicts with peers. These children were ill-equipped to resolve conflicts on their own, and they exhibited poor coping skills. They frequently relied on teacher intervention to resolve peer conflicts (Horowitz, Boardman, & Relener, 1994).

Encourage collaboration and social interaction. Through interactions with children who are different from themselves, children can begin to see diversity as a strength, realize that human differences are not deficiencies, and view their experiences from new perspectives (Day-Vines, Day-Hairston, Carruthers, Wall, & Lupton-Smith, 1996). Learning through active experiences is common to all young children, despite differences in backgrounds, home languages, or individual traits (Deiner, 1993; Enright & McCloskey, 1988; King, Chipman, & Cruz-Janzen, 1994). Spatial arrangements that cluster children into small groups and materials that encourage collaboration promote the interaction of all young children, including those with disabilities (Hanline, 1985).

Cooperative learning activities provide a context for social interaction, and help develop a sense of community. In multilingual early childhood settings, cooperative learning provides an ideal context for enhancing language and literacy skills (Enright & McCloskey, 1988; Meloth, 1991). In collaborative contexts, children learn to share materials, give encouragement, and help each other. Teachers model prosocial behaviors, reward children's prosocial behaviors, and plan noncompetitive activities (Kostelnik et al., 1998).

Teachers in ECI programs act as strong socializing agents who foster social interactions and promote acceptance. By modeling respect and acceptance of all children, they convey a strong message of valuing human diversity (Buswell & Schaffner, 1992; King et al., 1994). When children with disabilities are included in early childhood settings, the teacher may need to facilitate the formation of friendships across ability levels. Interventions as simple as providing positive reinforcement have been shown to increase such interactions (Guralnick, 1993; Hanline, 1985; Peterson & McConnell, 1993).

Evidence suggests that teachers need to be alert to signs that certain children are receiving less attention or suffering from peer rejection. Peer rejection is associated closely with negative school outcomes. One study suggests that while race is a factor in peer rejection, it is not race itself that determines rejection. Instead, being a racial *minority* is associated with peer rejection. As children reach the later elementary years, typical patterns of play also appear to contribute to an increased risk of peer rejection, especially for girls in the racial minority. Boys tend to play in large groups with a greater number of peers. Conversely, girls tend to play in smaller groups with

less interaction (Kistner, Metzler, Gatlin, & Risi, 1993).

Children with Attention Deficit Hyperactivity Disorder (ADHD) are at risk for peer rejection, as well as for psychological problems, school failure, and interpersonal maladjustment. It appears that the impulsiveness of ADHD children is associated with peer rejection to a greater degree than it is to the excessive activity level these children characteristically exhibit (Pelham & Milich, 1984). The tendency of ADHD children to impulsively disrupt learning activities has prompted Saunders and Chambers (1996) to recommend teacher intervention to facilitate the collaboration of these children with their peers. In ECI programs, teachers remain aware of any patterns of peer rejection that emerge and immediately begin to intervene, so as to encourage social interaction.

Foster cross-cultural competence through communication. Teachers are valuable models for demonstrating cross-cultural competence through verbal and nonverbal communication. By encouraging children to communicate in the language or communication mode of their choice, they indicate respect of different languages and cultures. It also is important to pronounce children's names correctly, and to learn words or greetings in each child's home language (Hyun & Fowler, 1995; Perez, 1994). The early childhood years are a critical period for the development of social, language, and communication skills. Developing these skills in the culturally and linguistically diverse contexts of ECI programs prepares children for life in a diverse, global society. An understanding of both verbal and nonverbal modes of communication increases the cross-cultural competence of children and teachers (Lynch, 1992). In culturally and linguistically diverse ECI programs, one child might use Spanish, while another may use sign language or a communication device. Some children may demonstrate precocious language skills, while others may have language delays or disabilities. It is important for all children to learn that messages can be conveyed in many different ways. Teachers in ECI contexts encourage children to use various ways of communicating with one another, and so they plan a learning environment that invites communicative interaction. Such authentic social contexts promote children's practice of language and the acquisition of new communication skills (McLean, 1992).

Interpreting nonverbal communication is an important part of acquiring cross-cultural competence for children and teachers. As much as 65 percent of a message is conveyed through nonverbal communication (Antes, 1996; Skow & Whitaker, 1996). Such nonverbal behaviors can vary in meaning from one culture to another. Eye contact, facial expressions, proximity, touch, and body language can communicate different information, based on the cultural contexts (Lynch, 1992). If children learn to interpret nonverbal communication accurately within various cultural contexts, they will be better prepared to interact socially and resolve conflicts more easily (Davidman & Davidman, 1994; Kostelnik et al., 1998).

Teachers' misinterpretations of nonverbal behavior can lead to inappropriate responses to children, and to ineffective behavioral interventions (Hyun & Fowler, 1995; Rothenberg & Cassant, 1996). Learning different cultural interpretations of nonverbal behavior is a way of showing respect and cultural sensitivity to children

and their families. Furthermore, these skills can facilitate conferencing with parents and collaborative planning efforts (Hyun & Fowler, 1995; Lynch & Hanson, 1992; Skow & Whitaker, 1996).

Young children are sensitive to nonverbal communication. Visual signals can help children attend to and process verbal information, and allow them to express information that they might not be able to communicate otherwise (Doherty-Sneddon & Kent, 1996). Consequently, it is important for teachers to respond to children's nonverbal communications (Doherty-Sneddon & Kent, 1996; McLean, 1992). One study suggests that moderate amounts of nonverbal communication, paired with verbalization, can increase learning (Comstock, Rowell, & Bowers, 1995). Considering these findings, it may be prudent for teachers to use moderate amounts of nonverbal communication, in tandem with verbal communication, as a guidance strategy in ECI programs. Care must be taken to ensure that the nonverbal cues are acceptable in the cultural contexts of children and their families (Hyun & Fowler, 1995; Kostelnik et al., 1998; Lynch, 1992).

Organize Curricular Activities

Curricular activities that promote the socio-emotional development and inclusion of young children are key aspects of ECI programs. "Curriculum" in early childhood refers to the kinds of educational experiences that are planned to facilitate children's construction of concepts, development of skills, or engagement in the learning processes. Organizational plans that teachers devise to bring structure to those experiences can influence children's integration into ECI learning experiences.

One ecobehavioral study of preschoolers in an inclusive setting compared the behaviors of children with typical development to those of children whose abilities ranged from mild developmental delays to severe disabilities. The investigator found that the type of organizational arrangements used for learning activities influenced the degree of integration into curricular experiences that children with delays or disabilities were able to achieve. When curricular activities were conducted in a large-group "rug time" instructional format, these children exhibited low levels of engagement. They appeared to experience difficulty when the primary expectation was to sit quietly and listen to the teacher. Conversely, when curricular activities were offered in learning centers, levels of engagement in activities and interactions with peers were higher. Hence, the organizational arrangements had an effect on the quality of experiences afforded to the children with disabilities. One probable advantage of this organizational arrangement is the greater availability of teachers to initiate, encourage, and facilitate involvement of children in learning tasks and social interactions (Burstein, 1986).

Similarly, according to a longitudinal study of at-risk 1st-graders, organizational arrangements for instruction that afford greater interaction with teachers and opportunities for collaboration with peers may enhance some at-risk children's chances for academic success. This study considered academic success to be achievement that was sufficient to avoid special education placement. The study further suggests that children's individual characteristics influence their reactions to the teacher's choice

of instructional arrangements. While some children are able to overcome disadvantages of certain arrangements through hard work or other coping strategies, others fail to cope and, consequently, suffer the full brunt of any detrimental effects associated with the arrangement. For example, one organizational arrangement commonly used during reading instruction is to rotate children through small-group reading circles with the teacher, while the rest of the class completes independent seat work. The study's findings suggest that this organization was particularly hazardous for some at-risk children. Independent seat work assumes that children remember the teacher's oral instructions, can read any written instructions, and are capable of remaining on task without monitoring and feedback from the teacher. The researchers propose that at-risk children might benefit from collaboration and peer tutoring situations (Cooper & Speece, 1990).

Maximize Time for Learning

Research indicates that the amount of time devoted to learning is associated closely with children's success. Yet, typical classrooms use half or less of the school day for instruction (Evertson & Harris, 1992). Time is considered to be an extremely valuable commodity in an ECI program. Each minute counts when the goal is to maximize the potential of every child. Meeting the individual needs of children who vary widely in ability, interests, and preferences, however, is extremely time-consuming. A child who is developmentally delayed may need extra time and attention to acquire a concept or practice a skill; children with high ability may need extra activities that offer appropriate challenges (Freiberg & Driscoll, 1996).

Unfortunately, many factors work against the efficient use of time in ECI settings. The wide span of children's abilities, the likelihood of behavioral problems among children, the use of assistive devices to accommodate certain children, and the multiple teachers and specialists involved in programming are among the many factors that make time management difficult. Still, certain organizational and management strategies can help maximize time.

Organize time into flexible blocks. Scheduling enables teachers to break the day into manageable time frames and to establish routines. These measures help children pace their activities, gain a concept of time, and learn how to use their time efficiently. Interspersing vigorous, active learning experiences with periods of rest and quieter pursuits prevents overstimulation and exhaustion (Gareau & Kennedy, 1991; Hendrick, 1998). Children's needs, rather than tradition, should determine time schedules.

Tradition would have early childhood teachers begin the day with opening exercises for the whole group, such as a greeting song, calendar activities, and checking the weather or helper charts. Typically, these activities involve wait time as children arrive and assemble and are encouraged to "sit still" and "listen." A more efficient and effective use of time would be allowing children to proceed to learning center activities as soon as they arrive. This schedule allows teachers to greet children individually and involves the children in active learning when they are fresh and rested. If the children need to assemble as a total group, time can be scheduled

toward the middle of the day, when children can benefit from a few minutes of quieter activity (Crosser, 1992; Gareau & Kennedy, 1991). Creating time frames and establishing routines also make the day more predictable, thus fostering a sense of security. A reliable learning environment can promote children's development of self-control and may help prevent problem behaviors that require intervention.

While using time efficiently and maintaining a reliable learning environment are important, rigid time scheduling and routines are detrimental to children's cognitive and socio-emotional development. Flexibility is needed to honor the right of children to take the lead in their own learning. With a flexible time schedule, children can follow their curiosity or play until their activities arrive at a natural conclusion. Inflexible time schedules, made up of multiple short time periods, impose artificial end points that rob learners of their independence; they also may hamper learning. Young children require ample time to achieve success and thus earn feelings of competence. Urging children to hurry is distracting and may actually lengthen the time they need to complete a task. By rushing children, teachers may provoke noncompliant behaviors as the children resist the teacher's directions. Insufficient time to elaborate on learning may result in uneven development across developmental domains (Miller, 1996).

Improve quality of play with time. The quality of children's play is affected by how long they remain involved. With time, the intensity of children's dramatic play increases and they engage in more mature forms of play. Therefore, it appears that longer periods for play, rather than multiple short time spans, impart greater benefits to children. Scheduling play time spans of 30 minutes to one hour has been recommended for preschoolers and kindergartners. Teachers should be alert, however, to the flow of children's play, and use that to guide their decisions regarding transitions to other activities (Christie, Johnsen, & Peckover, 1988; Christie & Wardle, 1992; Frost, 1992; Johnson, Christie, & Yawkey, 1987; Peters, Neisworth, & Yawkey, 1985).

While specific time frames have not been established for programs that serve diverse groups of young children, planning large blocks of time for learning activities allows teachers the maximum flexibility to accommodate individual children. Teachers in ECI settings create a flexible schedule that allows for extra time to be allotted for the enhancement of individual children's learning. Children who are gifted may wish to explore an activity or set of materials more fully. A child with motor impairments may move more slowly than other children or experience difficulty in manipulating toys and materials. This child may require extended time if he is to become involved enough to gain the full benefit of his activities.

Large, flexible blocks of time for learning are vital to the social and language development of children who are linguistically diverse. Kitagawa (1991) suggests organizing the day into four flexible blocks of time. She believes that this step preserves the freedom of a "community of learners" to explore within and beyond thematic, interdisciplinary units. Time flexibility also encourages teachers to respond to "authentic" groups of children with unique characteristics, rather than requiring children to fit the teacher's prescribed schedule (Kitagawa, 1991).

Reduce transitions and interruptions. Longer time spans for children's

activities also reduce the number of transitions children must negotiate during the day. Frequent transitions can fragment the day and are mentally taxing, for both children and teachers. With each shift, children must expend psychological energy to meet a new set of demands. The stress and tension of harried schedules can affect moods throughout the school (Hendrick, 1998). Gifted children who are prone to overexcitability may become extremely anxious during transitions to new situations or different classrooms (Tucker & Hafenstein, 1997). Some teachers plan many transitions into the schedule, mistakenly believing that multiple short activities accommodate young children's short attention spans. When teachers emphasize the completion of tasks as the impetus for transitions to other activities, however, children learn to lengthen their attention spans (Gareau & Kennedy, 1991).

Fragmentation of the day remains a risk when children are taught by various teachers, such as specialists in music, physical education, computers, and art. ECI programs may be at even greater risk of fragmentation. Often, these programs involve additional specialists who help meet the needs of individual children, such as specialists in reading, speech and language pathology, English as a Second Language (ESL), occupational therapy, physical therapy, counseling, gifted and talented education, and other services. The number of interruptions and transitions children and their teachers must face each day can be minimized by integrating therapeutic interventions and specialized instruction into the learning activities.

By pairing flexible time-block scheduling with the use of learning centers, teachers can manage time more efficiently. Learning centers that permit children to freely initiate their own choice of activities during flexible time blocks eliminate wait time. Children can work at their own pace with activities that challenge them. Teachers can facilitate the children's efforts and encourage completion of the task as a prerequisite to selecting another activity. During the center time, some children may complete one activity, while others may complete several. Children's abilities and their level of interest, as well as the type of the activity, will influence the length of engagement.

Learning centers accommodate a variety of different learning contexts. Their flexibility makes them ideal for integrating the intervention of specialists into children's natural activities. Careful planning to ensure that therapy is truly integrated into activities is needed to avoid isolating children within the room or focusing undue attention on their differences. Careful preparation for instructional activities and planning for smooth transitions help teachers use time wisely and minimize the amount of time children spend waiting, which frequently results in misbehavior and additional loss of time as teachers discipline children (Freiberg & Driscoll, 1996). Advance planning also ensures that all teachers, specialists, assistants, and volunteers working with the group of children know how they will coordinate their efforts. Regularly scheduled team planning sessions can lessen the amount of time needed for conferring during children's prime learning times. When all teachers, specialists, and others are prepared to begin their activities immediately upon entering the classroom, more of their time can be spent interacting with children, and children suffer fewer distractions from learning.

Integrating Therapeutic Intervention Strategies

Children with disabilities in inclusive early childhood settings often require therapeutic intervention from mental health professionals, speech and language pathologists, occupational therapists, or physical therapists. Providing such services through pull-out programs can interfere with the child's inclusion, lead to scheduling difficulties, disrupt the child's activities or peer interactions, and overemphasize the child's "special" status. Conducting one-to-one therapy sessions within the classroom, however, could have the same deleterious effects of isolation or exclusion from normalizing activities. Whenever possible, clinicians should collaborate with teachers to integrate therapeutic intervention strategies into the natural contexts of early childhood settings. Play and routine activities provide authentic situations for embedding therapy, assessing progress, and helping children generalize the skills introduced through therapeutic intervention.

Bauer and Balius (1995) contend that integrating education and mental health services enhances the effects of each. They recommend integrating bibliotherapy—emotional intervention using storytelling—into an academic curriculum. Through stories, children can learn to become more aware of their feelings, develop better coping strategies, and increase both communication and participation during classroom activities. Children also can learn strategies for conflict resolution and problem solving. For full integration into the curriculum, Bauer and Balius suggest "compacting" the existing academic curriculum to allow time for follow-up activities that involve role-playing, language, writing, and art. They found that children with serious emotional disabilities, including some with additional physical, developmental, or neurological problems, benefited from integrating bibliotherapy into the academic curriculum.

This strategy appears to have applicability and relevance for inclusive classrooms. Children with typical development could provide valuable insights and serve as models for children with emotional disturbances. The therapist could conduct the activity with the entire group while the teacher models appropriate behaviors. If small groups are desired, the therapist could work with one heterogeneous group at a time while the rest of the children participate in learning centers under the teacher's supervision. In some cases, it may be preferable for the mental health clinician to train the teacher in the bibliotherapy techniques so that the teacher can conduct the sessions, with occasional monitoring by the clinician. The implementation scheme should be evaluated to ensure the maximum benefit can be gained from the therapeutic intervention.

Total integration into the curriculum may be impossible when specialized therapy equipment or circumstances are needed. In these cases, clinicians and teachers should collaborate to achieve the greatest degree of integration feasible. In one account, Abrams (1996) describes individual and small-group speech and language therapy sessions conducted by the clinician outside the classroom that still achieved a high degree of integration with the preschool curriculum. Through collaboration by the teacher and clinician, therapeutic intervention strategies were play-based and carefully coordinated to enhance the teacher's curricular activities. In addition to

collaborating with the teacher, the clinician maintained close contact with each child's family to ensure the relevance of the language therapy. Abrams notes that integrating speech and language therapy into the preschool curricula makes sense from a developmental perspective (Abrams, 1996).

David

The speech therapist and David's teacher planned ways to integrate the speech practice into the classroom activities. David needed practice on using the two sounds formed in the back palate of the mouth, /g/ and /k/. The teacher and therapist found items with those sounds in their names to place in the learning centers, such as grapes, cantaloupe, cups, and cookies. The therapist joined David and his friends in the dramatic play center for a tea party. She encouraged David to converse and use the targeted vocabulary words. Later, the therapist found a fingerplay that used the /g/ and /k/ sounds and taught it to all the children.

Build the Skills and Competence of Each Child

Children's socio-emotional development relies upon daily activities that build skills and competence. Children are most motivated to learn when they feel competent. Children need daily opportunities to succeed. A history of personal success leads to the development of a positive self-concept (Marion, 1995; Winter, 1994/95). Teachers in ECI programs plan for children's successful participation in activities that are matched to their strengths and preferred learning styles (Allen & Schwartz, 1996; Beaty, 1994; Dunn, Dunn, & Perrin, 1994).

It is vital to create a socio-organizational climate that allows children opportunities to assume responsibilities and accept challenges. Teachers in ECI programs allow children to learn by doing, and they offer guidance only as needed. Opportunities for choice help children learn to accept responsibility for their decisions. The level of control that children are given influences the degree to which they feel responsible for outcomes of their decisions. Children's opportunities to exert control, make choices, and accept responsibilities can be limited by authoritarian parenting and teaching styles (Marion, 1995).

When children learn a new skill or demonstrate progress, teachers can use positive verbal communication to note the achievement. Behavior reflections—nonjudgmental statements that describe the child's successful performance—are an important strategy. For example, behavior reflections such as, "You and Keesha worked together and put away all the blocks," help children feel competent and encourage cooperation. This strategy has proven highly effective with young children who have mental impairments. Children who are linguistically diverse benefit from behavior reflections that are stated using vocabulary that is comprehensible to the child. Another strategy is to help children develop plans for their activities that emphasize independent task completion. Teachers guide the planning process and may teach children strategies for accomplishing their tasks. Encouraging children to evaluate the efficacy of their plans also is a valuable experience that promotes competence (Kostelnik et al., 1998).

Use Effective Environmental Management Strategies

Much like the way that the physical environment affects children's learning and behaviors, environmental design and management of the physical environment are important to cognitive and socio-emotional development (Bailey & McWilliams, 1990; Marion, 1995). Consequently, manipulating the environment can be a powerful strategy for helping children learn, develop self-control, or change their behaviors. For instance, dimming lights in classrooms to encourage children to become quieter when they are noisy is a behavioral intervention strategy that appears to have some degree of scientific validity (Fletcher, 1983). Research indicates that crowded learning environments, poor organization of physical space, and insufficient materials contribute to increased aggressive behaviors (Bailey, Harms, & Clifford, 1983). Improving the quality of the environment appears to decrease children's misbehavior and increases their engagement in conversations and constructive play activities (Teets, 1985).

Cautious use of environmental cues. Using the power of the environment to convey messages can help children learn what behaviors are expected and acceptable in various areas of the learning environment. Signs posted in learning centers or other areas of the room can remind children of the rules for playing and working within those areas. Such environmental cues can facilitate the development of self-control and encourage independent learning. While deliberate environmental cues can send an overt message, it is critical to remember that symbolic messages also can be conveyed by these cues (Carta, Atwater, Schwartz, & Miller, 1990; Gifford, 1997; Weinstein, 1979). Consequently, attention to the kinds of covert information that children or families might infer is of utmost importance. For example, many teachers wish to give young children visual feedback on their behavioral performance. While this idea is good, poor implementation can result in damage to children's security and self-esteem. The following case illustrates how environmental cues can convey powerful symbolic messages.

Marta

While Marta and her 1st-grade classmates were usually cooperative, they sometimes talked too loudly or forgot other classroom rules. Yesterday, Marta and her friend talked while the teacher was reading a story to the class. In a stern voice, the teacher told Marta to move her clothespin. With her head hung low, Marta went to the front of the room and unclipped a clothespin with her name printed on it from the green "good kids" part of a color-coded yardstick. Sadly, she moved it down to the yellow colored section, which meant that Marta was in the warning zone. When Marta talked out of turn again later in the day, she had to move her clothespin to the red zone, which meant she would miss part of her recess outside. That evening, an open house event was scheduled at the school. Children in the 1st-grade excitedly showed their artwork and stories to their families. Marta's parents were proud of her well-written story with carefully drawn illustrations. Then, Marta's mother noticed the behavior chart with Marta's clothespin in the disciplinary action zone. Her face flushed with embarrassment! She had no idea that Marta was not cooperating with her teacher. Now, all her neighbors and friends would know about Marta's infractions, as well.

As a form of punishment, humiliation through visual displays is likely to damage a child's self-esteem. Developing self-control and self-discipline is certainly a developmental goal for young children that teachers in ECI settings strive to support and encourage. Rather than punishing undesirable behavior, however, ECI teachers emphasize rewarding behaviors that indicate progress toward self-discipline. In addition to causing embarrassment, the public display of the behavioral chart failed to respect the privacy of Marta and her family. It represented a breach in confidentiality, a right that is guaranteed to families by the Family Educational Rights and Privacy Act of 1974 (P.L. 93-380). This law protects the privacy of children and their families regarding all types of records, including informal assessments such as portfolios, that may contain sensitive information (McAfee & Leong, 1997). Marta's teacher could have kept individual behavior charts in folders to use privately with each child.

Plan and manage the technological environment. Technological tools are a tremendous resource in ECI programs. Many teachers, however, have not been trained to manage children's daily interactions with computers and other technological tools. A repertoire of strategies for managing children's use of technological resources can improve the smooth operation of inclusion classrooms.

In order to minimize the amount of time spent introducing computer hardware and software, new equipment and software can be made available for children to explore. Young children rarely are intimidated by technological tools (Clements, 1993). Consequently, giving children the freedom to explore and discover the capacities of equipment through play is a profitable strategy. This is valuable learning time for children that develops cognitive skills and stimulates their curiosity. As some children learn about the parameters of the equipment or software packages, teachers can encourage peer tutoring relationships with others.

Another strategy for introducing new items is collaborative play and inquiry, in which teachers model problem-solving strategies that children can use independently when the teacher is busy helping other children (Prickett, Higgins, & Boone, 1994). Teachers must determine the amount of interaction and guidance that children of various ages and ability levels need. The goals of promoting active exploration and helping children develop an awareness of how to care for equipment must be delicately balanced. Being overly vigiliant to one of these goals over the other can result in either inhibition of children using the equipment or damage to expensive resources.

Use proximity to manage open space environments. The teacher's proximity is a powerful management strategy in the open space, learning center-oriented ECI setting. To facilitate the children's learning, teachers plan for easy movement across the room. Open space arrangements allow teachers to gain proximity to children who may need assistance, and allows them to prevent disruptive behavior from escalating. If teachers can move into close proximity to children who are in conflict, they can ensure the safety of children and be available to mediate and encourage independent resolution.

Team teaching arrangements that include children with disabilities call for special precautions. These situations frequently involve pairing a general early childhood teacher with an early childhood special education teacher. Cavallaro and colleagues warn early childhood special education teachers to avoid constant "shadowing" or

intervening with children who have disabilities. Instead, they recommend that staff distribute their attention and interactions among *all* the children. Maintaining proximity with everyone avoids undue attention to children's differences, which may result in the stigmatization of children with disabilities by their nondisabled peers (Cavallaro, Haney, & Cabello, 1993).

EARLY IDENTIFICATION AND INTERVENTION

Teachers are reluctant to include children who evince a pattern of problem behavior, especially when their behavior is disruptive or otherwise problematic. Children who are seriously emotionally disturbed, aggressive, or who have ADHD present a challenge to both novice and experienced teachers (Fad & Ryser, 1993). Some children with problem behavior find it difficult to adjust to school settings that they perceive to be complex and challenging (Fad, Ross, & Boston, 1995). Their inability to cope may result in behaviors that can significantly interfere with their learning or the learning of other children. Equally detrimental, children's behavioral problems can hinder their social inclusion within their peer group. Consequently, teachers must be well prepared to respond with effective strategies.

Defining Problem Behavior

Wolery and Fleming (1992) use the term "problem behavior" to refer to behavior that engenders concern, warrants careful monitoring, or merits intervention by families, specialists, and early childhood teachers. In early childhood, this term seems particularly applicable to behaviors that may become more serious without early intervention.

While teachers in the United States report that as many as half of all elementary children exhibit incidental behavioral problems (Rubin & Balow, 1978), the prevalence of children with identifiable behavioral disorders is apparently somewhat lower. Determining exact numbers is difficult. Differences in criteria, definition, and statistical data collection methods affect estimates. Some reports indicate that from 0.05 percent to 20 percent of school-age children and from 14 percent to 20 percent of younger children have behavioral disorders. One point of agreement reported among investigators is that few of the school-age children, perhaps one-third, actually receive special education services (Hardman et al., 1996; Heward, 1996; Hunt et al., 1994; Kauffman, 1993).

Boys are at greater risk than girls of being identified as having emotional or behavioral disorders. Four times as many boys are identified in this category of disorders. Furthermore, gender differences also are found in type of disorders. Boys tend to have externalizing disorders, which are characterized by aggression, disobedience, and antisocial behaviors, while girls are more likely to display the anxiety, social withdrawal, phobias, fearfulness, and other symptoms that are associated with internalizing disorders (Cullinan, Epstein, & Kauffman, 1984; Cullinan, Epstein, & Sabornie, 1992; Hardman et al., 1996; Heward, 1996). Homelessness appears to place children at a greater risk of problem behavior. One study of homeless children in Los

Angeles County found that over 65 percent of these children were suffering from depression or other problem behaviors. Moreover, these maladies were more prevalent among the African American children in the sample (Zima, Wells, & Freeman, 1994).

Challenges for Teachers

Unfortunately, research indicates that general education teachers are more willing to include children with academic problems than those with problem behavior (Fad & Ryser, 1993). Children with disruptive behavior, emotional disturbances, or ADHD are a great challenge for teachers who already have too many children, insufficient time, and no support staff (Fad et al., 1995). A particularly difficult phase is when the teacher has not yet had sufficient time to determine whether the problem behavior is temporary or persistent.

Moreover, while some behaviors are typical at an early age, they may denote problem behavior if they persist beyond the expected age range. For example, the high activity levels and impulsivity that are typical of a preschooler may indicate ADHD in a school-age child (Landau & McAninch, 1993). In the hopes that the child will outgrow the problem behavior, administrators or parents may be reluctant to refer a child for diagnostic assessment. At times, observing and collecting data is more prudent than moving rapidly to identify and label children. Symptoms of certain emotional and behavioral disturbances can be confusing. For example, considerable controversy surrounds the behaviors that constitute Attention Deficit Hyperactivity Disorder (ADHD) and Attention Deficit Disorder (ADD). Many questions remain unanswered regarding the etiology, treatment, and educational implications of ADHD and ADD.

In ECI programs, teachers document occurrences of problem behavior, precipitating circumstances, and the contexts in which problem behavior occurs. This data can help in identifying problems and in planning appropriate ways to provide support. Even if a child is referred for diagnostic assessment by specialists, however, it may take time before the process is completed and special services are provided. If a child is eligible, federal mandates provide for a formalized system of collaboration among professionals and families. When a child does not qualify for special services, however, it is the responsibility of teachers and program staff to create an informal system of support that includes family members. School administrators can take the lead in assembling an informal support system of personnel to provide consultation and logistical support.

Skills for Early Identification and Intervention

Teachers in early childhood settings play a critical role in the early identification of problem behaviors in young children. Often, children's first social experiences outside the home with a peer group occur in early childhood settings. Consequently, problem behaviors may surface in this scenario that have not been exhibited in the home environment. The diverse characteristics children bring to inclusive settings make it imperative for ECI teachers to acquire assessment and evaluative skills for identifying problems in learning, establishing social relationships, and promoting emotional growth.

Lydia

From the first day of school, her teacher noticed that Lydia's behavior was different from those of other children in the 1st grade. Lydia wandered around the classroom, disrupting the activities of other children and taking their belongings. If a child objected to giving up an item, Lydia threw a huge temper tantrum. Her teacher began to document such episodes. She spoke with Lydia's mother, who said she also had difficulty with Lydia's behavior and once had been reported to the authorities for yelling at Lydia so much. The mother expressed her desperation, and her worry about Lydia's safety and that of her siblings. Lydia routinely climbed the 6-foot-high fence in her backyard and roamed the neighborhood for hours. She was very aggressive with her brothers and sisters. She would bite, scratch, and hit them with little provocation. Lydia's teacher spoke with the school counselor about resources that might be available to support Lydia's mother, and then she arranged another meeting to discuss a referral for diagnosis.

Understand Child Development From Different Perspectives

A firm grounding in child development enhances teachers' ability to identify children with problem behaviors. By understanding how children typically develop in the socio-emotional domain, teachers can recognize atypical patterns of development. Moreover, this knowledge helps teachers understand the interrelatedness of development and how delays in cognitive, language, or motor development can affect socio-emotional growth (Kostelnik et al., 1998; Marion, 1995; Trawick-Smith, 1997).

In addition to understanding child development from a traditional perspective, it is critical to apply a multicultural perspective when evaluating young children's behaviors. Certain variations in children's cognitive thinking and social behaviors are attributable to culture. Consequently, these cultural factors influence children's social interactions and the strategies they use to resolve peer conflicts (Trawick-Smith, 1997). Culturally transmitted values can be associated with the styles of communication. When expressing their thoughts and feelings, children from Asian, Hispanic, and Native American cultures may use less verbal communication than African American children. Furthermore, children's use and interpretation of nonverbal communication behaviors vary with culture. Direct eye contact is a good example of behavior that is correlated to cultural values and customs. Children of African American or Hispanic heritages may avoid eye contact out of fear of, or deference to, an adult. Other children and teachers may misunderstand the children's intentions when they are unaware of such cultural variations (Day-Vines et al., 1996; Gudykunst & Kim, 1992). Therefore, understanding cross-cultural differences in values, interpretations of behaviors, and styles of communication is a vital skill when discriminating problem behaviors in culturally diverse groups.

Analyze patterns of behavior. A thorough understanding of applied behavior analysis may help teachers identify patterns of problem behavior that could lead to more serious behavioral disorders if left unchecked. Observing for antecedent conditions that could influence children's behaviors is critical in deciding whether intervention is needed (Charles, 1996). When intervention is deemed necessary, such information can be invaluable.

During analysis, the context in which the child was functioning must be considered (Wolery & Fleming, 1992). Learning activities may fail to motivate or challenge a child, or the child may be distracted by peers or various stimuli in the room. These conditions may precede a child breaking rules, behaving inappropriately, or performing poorly. Moreover, understanding principles of reinforcement enables teachers to analyze what conditions may be present in the early childhood setting that sustain undesired behaviors. Conversely, analysis can reveal what conditions are not present that could be added to help develop behavior that is conducive to learning and social inclusion (Charles, 1996; Wolfgang, 1995).

Adopt an ecobehavioral orientation. Teachers in ECI settings realize that many dimensions influence children's socio-emotional development and behavior. Some of these factors include nurturance, love, physical care, and nutrition. Such ecological factors interact with teacher behaviors, instructional variables, and the physical environment of the early childhood setting (Fad & Ryser, 1993; Kostelnik et al., 1998).

An ecobehavioral approach seeks to examine the interaction between the ecology of the learning environment and the behaviors of young children. Consequently, teachers gather data to analyze the relationships among physical environmental features, persons in the learning environment, and children's behaviors. Such ecobehavioral analysis can yield information that is useful in planning transitions for children across various early childhood settings (Carta et al., 1990).

Research shows that some teachers tend to attribute problems or poor performance to a child's inherent factors, such as learning disabilities, brain damage, or perceptual difficulties. This practice can lead teachers to prematurely label a child as "deficient." In contrast, a teacher with an ecobehavioral orientation tries to identify variables in the immediate setting or the ecological system surrounding the child that might exert a detrimental influence on the child's behavior or performance (Desouza & Sivewright, 1993).

Rather than seeking a quick solution for behaviors that are viewed as disruptive or immature, a teacher with an ecobehavioral orientation tries to identify the ecological contexts in the home, community, and early childhood setting that may influence the child's progress in socio-emotional development. When an ecobehavioral orientation is combined with a team approach to planning, a powerful system for promoting the socio-emotional development of children emerges. ECI teachers join with specialists and family members to evaluate the socio-emotional status of individual children and plan ways to support the child's growth in this area of development. Once possible ecological influences are identified, methods of support or intervention strategies that are deemed necessary can be implemented across home, school, and community contexts.

As always, flexibility and a willingness to adjust strategies based on children's responses are needed. Sometimes, the exact nature of the link between environmental factors and the influences they exert on individual children is rather obscure and difficult to recognize. Quite by accident, one kindergarten teacher discovered a relationship between ecological factors and a child's disruptive behavior that led her to plan an effective environmental intervention strategy.

Annie

Annie regularly dismantled the learning centers in her kindergarten classroom at lightning speed. By 10:00 each morning, her classroom could be declared a disaster area! Suspecting that this child had an extreme case of hyperactivity and an attention deficit, her exasperated teacher initiated the school's referral process for special education services. One day, Annie was particularly destructive. She wiped shelves clean of building blocks and toys, stomped all the puzzle boxes flat, and scattered library books across the floor. In desperation, her teacher placed an individual desk to one side of the room with the intention of placing Annie in "time out." She hurriedly placed a few books, some crayons, and a paper tablet on the desk and turned to Annie. "This is your desk, Annie," she said. "Please sit here and work," she instructed. To the teacher's surprise, Annie quietly read the books and drew pictures for 30 minutes without attempting to leave the desk. When it was time to go to lunch, Annie carefully arranged the materials on her desk. The next day, Annie chose to play at her desk when the other children played in learning centers. At lunchtime, Annie again painstakingly arranged the materials on her desk. She carefully washed the top of her desk at the end of each day and hung her drawings on the wall next to the desk.

After several days of watching Annie's unanticipated response, the stunned teacher began to figure out possible reasons for Annie's radical change in behavior. Teachers who had made home visits in the neighborhood reported that the homes in this economically disadvantaged urban area were generally rundown, and the contents of the living quarters disorganized. Typically, small dwellings were shared by large, extended families. A visit to Annie's home confirmed these reports. Annie's family home afforded virtually no privacy for individual family members. Everything, including a modest supply of toys, was shared with siblings, cousins, aunts, and uncles. The teacher also discovered that Annie and her mother moved frequently. They stayed with relatives or friends for only a few months at a time.

Following this visit, the teacher was more sensitive to Annie's need for privacy and ownership. She had a better understanding of Annie's apparent lack of care for toys and materials intended for the group. The teacher believed that by inadvertently giving Annie a space and materials of her own, she had given Annie an opportunity to know privacy and to value ownership. With this knowledge, the teacher maintained a private space for Annie throughout the year. She also rearranged the room to create more privacy for other children, as well. The teacher encouraged the family to allow Annie opportunities for ownership and to assign some simple responsibilities. With the teacher's help, Annie gradually learned to spend more time with her peers in the learning centers. By the end of the year, she was able to interact in a small group productively for short periods of time, and she exhibited greater responsibility for toys and materials shared by the group.

The episode with Annie illustrates the importance of adopting an ecobehavioral orientation toward children's behavior and socio-emotional development. Ecological

influences can strongly influence children's behaviors, and when these influences become apparent, effective interventions can be planned. The teacher in this case was able to plan an effective environmental intervention strategy to implement both at school and in the child's home. In testing her strategy, the teacher clearly learned that environmental intervention can be a powerful tool for improving children's affective performance in early childhood settings. Having gained a keener appreciation of environmental intervention, Annie's teacher now watches for other possible ecological influences and tries changing the environment in ways that may positively influence children's behavior.

Build a Web of Support for Families

In the 1990s, the U.S. Office of Special Education and Rehabilitative Services (OSERS) developed an initiative that prompted the formulation of a national agenda, aimed at facilitating collaborations between educators and families of children with identified emotional and behavioral disabilities who are eligible for services. This action led to the development of demonstration projects to determine effective methods of fostering family involvement in programs for children with emotional and behavioral disabilities (Cheney, Manning, & Upham, 1997).

ECI programs recognize the importance of supporting families of children with problem behavior and involving them in collaboration. As soon as concerns arise about a child's behavior, teachers and other staff begin building a web of support around the child and his family. Identifying resources within the family, school, and community is a critical first step toward helping a child who exhibits problem behavior. Administrators, teachers, and specialists in ECI programs play an important role in garnering such resources and developing a human support system that can bolster a child and his family.

Establish effective communication. When families have concerns about their children, a teacher who is skilled in effective listening and communication strategies becomes a valuable partner. By taking the time to listen, a teacher gains insights and information that can lead to strategies for supporting children and their families. A true partnership requires that teachers respect and value families' contributions. Also, teachers can support and empower parents whose stress levels are high in contrast with their plummeting morale and low confidence in their parenting skills (Berger, 1995).

Collaborate in the decision-making process. It is in the best interests of children for professionals and families to arrive at a consensus regarding whether the problem behavior is serious enough to require intervention. The potential benefits to the child, rather than convenience for adults, should be the foremost consideration during the decision-making process. When it is warranted, early and intensive intervention can make a tremendous difference in the long-term prognosis for some children with problem behavior. Decisions that involve changing a child's behavior, however, should be handled publicly and involve a team of professionals and the child's family, to ensure selection of ethical and humane intervention methods (Wolery & Fleming, 1992). Fad, Ross, & Boston (1995) recommend a problem-

solving model that clarifies the nature of the problem behavior by describing the contexts and results of the behavior. The goal of this model is to help team members reach consensus on a plan of action that can be implemented and evaluated for effectiveness.

Provide comprehensive early intervention. A comprehensive approach to early intervention is critical. When a child with problem behaviors qualifies for special services, the law mandates planning of an Individualized Family Service Plan (IFSP) for children under 3 years (P.L. 99-457) and an Individualized Education Program (IEP) for school-age children (IDEA, P.L. 102-119) (Deiner, 1993). An ecological approach that employs the collaboration of a multidisciplinary team of professionals, the involvement of families, and use of community resources strengthens the web of support for young children with problem behavior and their families. Moreover, an ecological approach emphasizes the implementation of intervention in the school, home, and community, which creates a consistent set of behavioral expectations and management techniques across all contexts. Moreover, this approach increases the effectiveness of intervention by providing multiple opportunities for children to practice newly acquired behavioral skills and to generalize those skills to a variety of contexts. Such a web of support is especially critical, considering that children with behavioral problems are at an increased risk of child abuse, and considering that ineffective styles of parenting can aggravate children's problems (Hardman et al., 1996; Hunt et al., 1994; Wolery & Fleming, 1992).

One survey of parents with children younger than 3 reveals differences in parental perceptions of problem behavior. Parents of children who are developmentally at-risk report more problem behavior occurring during their children's first year and persisting beyond that period. Although the average number of problem behaviors reported by parents of children with typical development was similar to the numbers reported by parents of children who were at-risk, the latter group of parents expressed greater concern (Blackman & Cobb, 1989). Consequently, ongoing psychological support services to families, especially those with children who are developmentally at-risk, may be needed to improve these young children's chances for success. Unfortunately, community-based mental health services are often costly and thus out of reach for many families. Therefore, integrating flexible behavioral consultation services for families into ECI programs is especially helpful (Hunt et al., 1994).

Use a Continuum of Interventions

When children exhibit problem behavior in ECI settings, a continuum of interventions allows teachers to deal with mildly disruptive behaviors by using measures of less intensity and shorter duration. Conversely, more serious problem behaviors may warrant interventions that are more intrusive and require a greater commitment of time and effort. Multidisciplinary planning teams can devise behavior change strategies that address variables, such as the environment, types of learning activities offered, schedules, consequences, or reinforcers (Fad et al., 1995). Again, teachers need the flexibility to match their intervention strategies to individual children's needs.

Prepare for emergency intervention strategies. Despite all preventive measures, some young children may still exhibit episodes of problem behaviors that

require immediate intervention. When patterns of disruptive behavior, physical aggression, verbal aggression, temper tantrums, and noncompliance develop, comprehensive intervention—planned by a multidisciplinary team and implemented over time—often is warranted. Teachers also must be prepared for coping with incidental problem behavior that can occur without advance warning.

Teachers in ECI programs are trained to handle potentially dangerous episodes of aggression or loss of self-control, using techniques that preserve the safety of children in the group and prevent a child from injury. Training in the use of passive restraint techniques can boost the confidence of teachers and help ensure safety in the classroom. Use of these techniques is reserved for only potentially dangerous situations. Teachers using these techniques soothe children verbally as they carefully hold them with only enough strength to ensure their protection (Miller, 1984). Preestablished procedures cover summoning assistance and ensuring supervision of the other children.

Support, guide, and model. Children who are exhibiting problem behavior will respond to a sensitive teacher who sets fair limits that are consistently enforced. Limits encourage children to change their own behavior, rather than relying on external control (Reynolds, 1996). When children are allowed to suffer the natural consequences of their actions, they have an opportunity to learn self-responsibility (Marion, 1995; Miller, 1984). Teachers guide and support the development of children's inductive reasoning skills, helping them see the reasons for limits and gently refocusing them toward regaining or maintaining their self-control during stressful situations (Castle & Rogers, 1993/1994; Honig & Lansburgh, 1991).

Development of self-control, one of the fundamental goals of ECI teachers, is gradual and depends upon the encouragement of patient teachers and families (Honig & Lansburgh, 1991; Miller, 1984). Learning self-control may be particularly difficult for some children. For example, the sensibilities of some children who are gifted, the impulsiveness of children with ADHD, and the learning problems that children with mental retardation or learning disabilities experience all may compound the difficulty of learning to exert self-control. These children need careful support and guidance.

The strength of the teacher as a behavioral role model is critical; teachers in ECI programs model self-control and responsible management of anger. They never demean or degrade children for making a mistake. Teachers treat children with care and respect, thereby building children's self-esteem and confidence. Teachers in ECI programs model acceptable strategies for acknowledging and managing a full range of emotions (Honig & Lansburgh, 1991; Marion, 1995).

Understand behavior change methods. Teachers in ECI programs have a thorough knowledge of techniques for shaping and changing children's behavior. At times, certain children require more intrusive measures, such as behavioral interventions planned specifically to enhance their learning or improve targeted behaviors. Applied behavioral analysis is a widely known behavior change model that evolved from the research of behaviorists such as Pavlov, Skinner, and Bandura (Schloss & Smith, 1994). This method has the flexibility for use with a wide range of behavior,

from withdrawal to high aggressiveness. Children who vary in their communication abilities, from nonverbal to highly verbal, also will respond to applied behavior analysis techniques (Wolfgang, 1995).

The major premise of applied behavior analysis is that behaviors can be shaped or changed by controlling environmental stimuli and planning reinforcement. Systems of rewards, varying in type and strength, are administered on a schedule for each child (Charles, 1996; Charles & Senter, 1995; Wolfgang, 1995). Clear rules for behavior are established, with an emphasis on letting children who break the rules experience the logical consequences of their actions, rather than suffering arbitrary punishments (Charles, 1996).

Research indicates that the use of punishment has a number of undesirable outcomes. When children view the punishment as unwarranted, they can develop persistent, negative feelings, or they may be provoked to retaliate. Since punishment is usually administered by teachers, parents, or others in positions of power, children may wrongly assume that punishment by authority figures or more powerful persons is justifiable. As a result, children may resort to asserting their own power against other children whom they view as less powerful (Charles, 1996; Kostelnik et al., 1998). Such social learning of power assertion is an undesirable and potentially dangerous outcome of punishment. On the other hand, the use of rewards is a positive way to encourage change, and teachers can individualize the types and amounts of reinforcements they use to match children's specific needs.

Applied behavior analysis is a highly structured system of discipline that has been criticized as antithetical to democratic ideals (Wolfgang, 1995). Some would argue, however, that a well-planned intervention, using behaviorist techniques, can help certain children gain greater control over their own behavior and reduce behaviors that interfere with their learning. As a result, these children eventually require a less structured learning environment, and their freedom increases. Unfortunately, applied behavior analysis methods focus on symptoms and fail to address underlying reasons for problem behavior that may originate in ecological layers of the child's home and community (Wolfgang, 1995). Therefore, in ECI programs, applied behavior analysis methods are used only in conjunction with other strategies.

Another disadvantage of applied behavior analysis techniques is that interventions using these strategies can be time-consuming, usually requiring long-term application. Consequently, teachers in ECI programs use behavior analysis methods judiciously. Having an entire class of young children on a token system of rewards or individual reinforcement schedules is time-consuming and inconvenient. Instead, such techniques might be used only with those few children who need strong intervention to reduce specifically targeted problem behavior, or to increase adaptive social or learning skills.

Aggressive acts, such as kicking, biting, or hair pulling, are potentially injurious and disruptive to learning activities. Withdrawal from social contact or stereotypic responses, such as repetitious hand flapping or rocking, also can limit children's engagement in learning activities and prevent social acceptance in the group. When children consistently engage in such maladaptive behaviors, which clearly hinder

their learning and the acquisition of prosocial behaviors, a serious consideration of behavior change techniques is warranted (Wolery & Fleming, 1992). Children exhibiting these behaviors can improve when teachers understand how to use applied behavior analysis (Deiner, 1993; Wolery & Fleming, 1992). Individualized reinforcement can encourage children with disabilities to engage in activities that build their skills (Bailey & Wolery, 1992).

Provide a Therapeutic Environment

Children need an emotionally safe climate in which to acknowledge and accept their feelings. Play therapy, based on the premise that children use their play with toys as a means of communicating their inner thoughts, desires, and conflicts (Fall, 1994; Landreth, 1993), can be beneficial in two primary ways. Therapeutic materials and play therapy techniques can help children develop skills for coping with their emotions and skills, thereby enhancing their social interactions. By observing children's use of therapeutic play materials, teachers can identify children with problem behaviors or those who have suffered emotionally damaging experiences, and start providing early intervention.

Homeless children are among those who most need safe educational environments to support their growth and development (Eddowes, 1994). A therapeutic environment allows children the freedom to risk working through difficult feelings and experiences in their lives with sensitive teachers who care about their emotional well-being. Caring teachers provide children with space for playing out feelings (Deiner, 1993), and they provide plentiful toys and materials that can be used representationally (Fall, 1994; Irwin, 1985). Young children can use play materials to work through internal conflicts they may have difficulty expressing verbally. Children may feel shy or inhibited talking to adults about matters that trouble them. Strong emotions, such as anger, fear, or distrust, may prevent them from airing their conflicts through direct communication (Carter, 1987; Edington, 1985; Fall, 1994; Irwin, 1985). One early play therapist, Axline (1947), recognized the value of nondirected, free play as an opportunity for children to release pent-up emotions. Very young children, those with language delays, or children acquiring a second language may lack the vocabulary and language skills needed to adequately express their frustrations and anxieties.

Add expressive media and representational toys. Art materials, such as paints, drawing media, and clay or play dough, can promote free expression of emotions. Blocks, miniature life toys, figurines, and dolls also may help children play through personal experiences (Fall, 1994; Irwin, 1985). Beanbag chairs are unique play therapy tools; children can pound them in anger or curl up in them when they crave security and comforting. Teachers or specialists can invite children to use the malleable beanbags representationally, arranging the forms to indicate how they feel (Fall, 1994).

Puppetry works well with those children representing a full range of abilities (Egge, Marks, & McEvers, 1987; James & Myer, 1987). Hand puppets are versatile, inexpensive props that lend themselves to a variety of play situations. Children—from tod-

dlers to adolescents—have shown their interest in using puppets in therapeutic situations (Edington, 1985; Egge et al., 1987; Schmidt & Biles, 1985). Puppets' unique properties allow children to use the puppets as an extension of themselves, without taking responsibility for the actions and words of the character portrayed (Gendler, 1986). For example, it is not unusual for children to act aggressively with puppets and "kill" them repeatedly. Of course, the puppets can instantly return to life (Edington, 1985; James & Myer, 1987). As therapeutic tools, puppets are nonthreatening icebreakers for children who are shy or mistrustful (Edington, 1985). An investigation of social cognition in Greece found that puppets encouraged preschool children to describe how they viewed themselves (Kondoyianni, 1997). Teachers can use puppets to model assertiveness and other appropriate ways to behave in various circumstances (James & Myer, 1987).

Puppets can be either fanciful or realistic, and represent either human or animal features. The emphasis should be on providing puppets that represent different personality types, rather than specific characters. It is important to include heroes and heroines, as well as lonely, downtrodden types. Representing mischievous, aggressive, or angry personalities is as important as including caring, friendly types (James & Myer, 1987). To ensure an ample supply, teachers can make homemade dolls and puppets using inexpensive or scrap materials, such as wooden clothespins, cardboard, or fabric sewn into mitts (Edington, 1985).

Sand play that incorporates toy miniatures is another popular play therapy method. A sand tray is a flat tray with a blue interior, to simulate water, that contains sand (Allan & Berry, 1987). As hundreds of miniatures representing people, buildings, vehicles, natural objects, vegetation, and other categories are available (Allan & Berry, 1987; Carmichael, 1994), the sand tray becomes a stage for dramatic play scenarios. As children play with the representational miniatures, themes and symbols emerge that may enable teachers or counselors to better understand a child's inner conflicts. The intent of providing therapeutic sand play is to encourage children to play out difficult emotions, and thereby regain their sense of emotional control and balance (Allan & Berry, 1987; Allan & Brown, 1993).

Many of the materials play therapists use are standard fare in early childhood classrooms. Teachers should recognize the power of these materials to help children heal and make others aware of their emotional pain. Adding therapeutic elements to the indoor and outdoor physical settings of ECI programs can aid teachers in the early identification of children who are troubled. Play therapists have found that children often reveal their conflicts, defense mechanisms, and coping styles as they engage in symbolic play scenarios (Irwin, 1985).

Learn play therapy techniques. Play therapists can take various roles, from highly directive to observational. Some therapists believe children should be allowed to play freely while the therapist observes to determine the purposes of the play behaviors (Kottman & Johnson, 1993). Others believe therapists can become involved in children's play, if the adult allows the child to prescribe the therapist's role in the play scenarios (Fall, 1994). It is important to let children come to grips with their feelings and to claim ownership of their emotions as they are ready (Carter, 1987).

The technological age offers yet another way for children to reflect on their emotions. When groups of young children enact plays using puppet characters, their communications are very spontaneous, often revealing strong emotions and deep conflicts. Videotapes of these plays enable children to witness their own emotions (Gendler, 1986). Generous time frames are needed so that children can play freely and arrive at their own solutions to problems. While the teacher or therapist sets some limits to prevent injuries or property damage, children have the freedom to play and express their feelings. This play is supported by teachers who are interested in and accepting of children's emotions (Kottman & Johnson, 1993; Landreth, 1993).

In cases where children have been severely traumatized by abuse or violence, the emotional state of a child may warrant planned therapeutic intervention with specialists. At times, play therapy intervention must be conducted in clinical settings to preserve a child's privacy. Play therapy can be successfully extended into the inclusive setting, however, when it is appropriate for the child (Wheat, 1995). Having a therapeutic environment available in an ECI classroom gives teachers and specialists the option to integrate therapeutic intervention into the curriculum or to augment what has occurred in the clinical setting. In school settings, the counselor's or therapist's office is typically small (Fall, 1994). Consequently, integrating play therapy into an ECI classroom may offer more physical space for children to act out their play dramas. Many professionals are now calling for increased integration of various forms of play therapy—once reserved primarily for clinical settings—into group, early childhood settings (Ferber, 1996; Koplow, 1996a, 1996b).

Providing opportunities for children to understand their emotions and develop coping skills is as important as planning for the advancement of cognitive skills. Children need time and safe places to work through unfamiliar feelings and difficult experiences by using therapeutic materials (Deiner, 1993; Ferber, 1996; Koplow, 1996a). Moreover, children need teachers they can trust to guide and support them as they engage in play that may become an outlet for emotions they do not understand (Deiner, 1993).

Accommodate Children's Learning Needs, Not Their Labels

Strategies for intervening with children who exhibit problem behavior must fit the learning needs of individual children. Intervention methods chosen solely on the basis of labels are insufficient to support young children's socio-emotional development and learning. For example, various strategies have been suggested for use with children who have been given the label of Attention Deficit Hyperactivity Disorder (ADHD) or Attention Deficit Disorder (ADD). Pharmacological interventions, applied behavior analysis, and home-school collaboration are among the strategies that have been examined through research. Unfortunately, no clear-cut answers have emerged (Fiore, Becker, & Nero, 1993; Reid, Maag, & Vasa, 1994). In some cases, the proposed measures contrast sharply, such as providing a stimulating classroom (Wright, 1995) vs. minimizing stimulation (Eanes, 1997). These contrasts might be explained, in part, by the controversy regarding the etiology and diagnosis of these conditions. Evidence suggests that the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-III-R) (American Psychiatric Association, 1987) definition of ADHD represents a group of

conditions, rather than a single condition. Research has established that ADHD has comorbidity with a number of other conduct and mood disorders, as well as learning disabilities, mental retardation, and Tourette's syndrome. These findings suggest the existence of subgroups that could be defined by patterns of comorbidity with other conditions (Biederman, Newcorn, & Sprich, 1991).

Additional circumstances further complicate the identification of children with ADHD or ADD, and the planning of intervention measures for these children. For example, teachers should remain open to the possibility that children who exhibit hyperactive or disruptive behaviors might be gifted (Kitano, 1989). Dabrowski (1964, 1972) proposed that children who were gifted had psychic overexcitabilities that were manifested by behaviors such as nervousness, impulsivity, surplus energy, sensitivity to sensory stimulation, and anxiety. Rather than viewing these behaviors as problematic, Dabrowski believed these behaviors were evidence of the child's developmental potential. Subsequent research has found additional evidence of these overexcitability behaviors in children who are gifted. Some studies indicate that this emotional and social sensitivity can develop into social leadership skills and the acquisition of prosocial behaviors, such as altruism (Hensel, 1991). These excitabilities in children who are gifted can result in misdiagnoses of ADHD, ADD, Sensory Integration Dysfunction, or neurotic tendencies (Tucker & Hafenstein, 1997). Cultural backgrounds also may be a consideration when identifying and planning for children with ADD. Cultural characteristics of children can present unique challenges to teachers in identifying children with ADD and planning interventions to meet their needs (Wright, 1995).

Remaining focused on the goal of understanding children as unique individuals is fundamental to establishing a positive socio-organizational climate in ECI classrooms. Teachers in ECI programs know that understanding the background and accommodating the unique characteristics of each child is key. Reliance solely on labels, and on the constellations of characteristics associated with those labels, is an ineffective technique for meeting the needs of young children as unique individuals.

CONCLUSION

The socio-organizational climate is a key component of ECI programs. Culturally competent teachers strive to recognize the strengths of individual children and collaborate with their families to provide support for each child's socio-emotional development. Teachers match their management style and socio-organizational strategies to the children's needs. Planning instructional arrangements for learning experiences, scheduling time frames, and arranging the physical environment to support the activities are essential organizational strategies for teachers of ECI programs. Establishing routines and procedures, and planning environmental arrangements that relay information to children about behavioral expectations and ways to function during learning activities, are preventive measures that can help children learn how to interact with their peers in the learning environment. Teachers in ECI programs are trained to identify children with problem behaviors and to collaborate with families and other professionals when intervention is needed. A multidisciplinary team approach to behavioral intervention best provides support to children and their families when intervention is implemented across contexts.

References

Abrams, S. (1996). In their own words: The work of the language therapist in preschool. In L. Koplow (Ed.), *Unsmiling faces: How preschools can heal* (pp. 64-74). New York: Teachers College Press.

Allan, J., & Berry, P. (1987). Sand play. *Elementary School Guidance & Counseling, 21*, 300-306.

Allan, J., & Brown, K. (1993). Jungian play therapy in elementary schools. *Elementary School Guidance & Counseling, 28*, 30-41.

Allen, K. E., & Schwartz, I. S. (1996). *The exceptional child: Inclusion in early childhood education* (3rd ed.). Albany, NY: Delmar.

American Association of University Women. (1991). *Shortchanging girls, shortchanging America: A call to action.* Washington, DC: Author.

American Psychiatric Association. (1987). *Diagnostic and statistical manual of mental disorders* (3rd ed.). Washington, DC: Author.

Antes, T. A. (1996). Kinesics: The value of gesture in language and in the language classroom. *Foreign Language Annals, 29*(3), 439-448.

Axline, V. M. (1947). *Play therapy.* Cambridge, MA: Houghton Mifflin.

Bailey, D. B., Harms, T., & Clifford, R. M. (1983). Matching changes in preschool environments to desired changes in child behavior. *Journal of the Division of Early Childhood, 7*, 61-68.

Bailey, D. B., & McWilliams, R. A. (1990). Normalizing early intervention. *Topics in Early Childhood Special Education, 10*(2), 33-47.

Bailey, D. B., & Wolery, M. (1992). *Teaching infants and preschoolers with disabilities* (2nd ed.). New York: Merrill/ Macmillan.

Baldwin, A. Y. (1994). The seven plus story: Developing hidden talent among students in socioeconomically disadvantaged environments. *Gifted Child Quarterly, 38*(2), 80-84.

Banks, J. (1993a). Multicultural education for young children: Racial and ethnic attitudes and their modification. In B. Spodek (Ed.), *Handbook of research on the education of young children* (pp. 236-250). New York: Macmillan.

Banks, J. (1993b). Multicultural education: Development, dimensions, and challenges. *Phi Delta Kappan, 75*(1), 22-28.

Banks, J. A. (1997). Multicultural education: Characteristics and goals. In J. A. Banks & C. A. M. Banks (Eds.), *Multicultural education: Issues and perspectives* (3rd ed., pp. 3-31). Boston: Allyn and Bacon.

Barkan, J. H., & Bernal, E. M. (1991). Gifted education for bilingual and limited English proficient students. *Gifted Child Quarterly, 35*, 144-147.

Bauer, M. S., & Balius, F. A. (1995). Putting real-life skills into IEP/IFSPs for infants and young children. *Teaching Exceptional Children, 27*(2), 29-32.

Beaty, J. J. (1994). *Observing development of the young child* (3rd ed.). New York: Macmillan.

Begler, E. (1993). Spinning wheels and straw: Balancing content, process, and context in global teacher education programs. *Theory Into Practice, 32*(1), 14-20.

Berger, E. H. (1995). *Parents as partners in education: Families and schools working together* (4th ed.). Englewood Cliffs, NJ: Merrill/Prentice Hall.

Biederman, J., Newcorn, J., & Sprich, S. (1991). Comorbidity of attention deficit hyperactivity disorder with conduct, depressive, anxiety, and other disorders. *American Journal of Psychiatry, 148*(5), 564-577.

Bischoff, L. G. (1994). Families of children with emotional and behavioral disabilities: Issues and strategies for educators. *Contemporary Education, 65*(3), 145-147.

Blackman, J. A., & Cobb, L. S. (1989). A comparison of parents' perceptions of common behavior problems in developmentally at-risk and normal children. *Children's Health Care, 18*(2), 108-113.

Bredekamp, S. (Ed.). (1987). *Developmentally appropriate practice in early childhood programs serving children from birth through age 8.* Washington, DC: National Association for the Education of Young Children.

Brown, R. (1991). Policy and the rationalization of schooling. In E. H. Hiebert (Ed.), *Literacy for a diverse society: Perspectives, practices, and policies* (pp. 217-227). New York: Teachers College Press.

Burstein, N. D. (1986). The effects of classroom organization on mainstreamed preschool children. *Exceptional Children, 52*(5), 425-434.

Buswell, B., & Schaffner, B. (1992). Building friendships—An important part of schooling. *News in Print, 4*(4), 5-9.

Carmichael, K. D. (1994). Sand play as an elementary school strategy. *Elementary School Guidance & Counseling, 28*, 302-307.

Carta, J. J., Atwater, J. B., Schwartz, I. S., & Miller, P. A. (1990). Applications of ecobehavioral analysis to the study of transitions across early education settings. *Education and Treatment of Children, 13*(4), 298-315.

Carter, S. R. (1987). Use of puppets to treat traumatic grief: A case study. *Elementary School Guidance & Counseling, 21*, 210-215.

Castle, K., & Rogers, K. (1993/1994). Rule-creating in a constructivist classroom community. *Childhood Education, 70*, 77-80.

Cavallaro, C. C., Haney, M., & Cabello, B. (1993). Developmentally appropriate strategies for promoting full participation in early childhood settings. *Topics in Early Childhood Special Education, 13*(3), 293-307.

Charles, C. M. (1996). *Building classroom discipline* (5th ed.). White Plains, NY: Longman.

Charles, C. M., & Senter, G. W. (1995). *Elementary classroom management* (2nd ed.). White Plains, NY: Longman.

Cheney, D., Manning, B., & Upham, D. (1997). Project DESTINY: Engaging families of students with emotional and behavioral disabilities. *Teaching Exceptional Children, 30*(1), 24-29.

Cheng, Y. C. (1994). Classroom environment and student affective performance: An effective profile. *Journal of Experimental Education, 62*(3), 221-239.

Christie, J. F., Johnsen, E. P., & Peckover, R. B. (1988). The effects of play periods duration in children's play patterns. *Journal of Research in Childhood Education, 3*(2), 123-131.

BEST COPY AVAILABLE

Christie, J. F., & Wardle, F. (1992). How much time is needed to play? *Young Children, 47*(3), 28-32.
Clark, B. (1993). Educating gifted students in a multicultural society. In J. A. Banks & C. A. M. Banks (Eds.), *Multicultural education: Issues and perspectives* (2nd ed., pp. 279-299). Boston: Allyn and Bacon.
Clements, D. H. (1993). Computer technology and early childhood education. In J. L. Roopnarine & J. E. Johnson (Eds.), *Approaches to early childhood education* (2nd ed., pp. 295-316). Upper Saddle River, NJ: Prentice Hall.
Comstock, J., Rowell, E., & Bowers, J. W. (1995). Food for thought: Teacher nonverbal immediacy, student learning, and curvilinearity. *Communication Education, 44*(3), 251-266.
Cooper, D. H., & Speece, D. L. (1990). Maintaining at-risk children in regular education settings: Initial effects of individual differences and classroom environments. *Exceptional Children, 57*(2), 117-126.
Cortes, C. (1996). Preparing for a multicultural future. *Principal, 76*(1), 16-20.
Crosser, S. (1992). Managing the early childhood classroom. *Young Children, 47*(2), 23-29.
Cullinan, D., Epstein, M. H., & Kauffman, J. M. (1984). Teachers' ratings of students behaviors: What constitutes behavior disorders in schools? *Behavioral Disorders, 10*, 9-19.
Cullinan, D., Epstein, M. H., & Sabornie, E. J. (1992). Selected characteristics of a national sample of seriously emotionally disturbed adolescents. *Behavioral Disorders, 17*, 273-280.
D'Andrea, M., & Daniels, J. (1996). Promoting peace in our school: Developmental preventive, and multicultural considerations. *The School Counselor, 44*, 55-63.
Dabrowski, K. (1964). *Positive disintegration.* Boston: Little, Brown.
Dabrowski, K. (1972). *Psychoneurosis is not an illness.* London: Gryf.
Davidman, L., & Davidman, P. (1994). *Teaching with a multicultural perspective: A practical guide.* New York: Longman.
Day-Vines, N., Day-Hairston, B., Carruthers, W., Wall, J., & Lupton-Smith, H. (1996). Conflict resolution: The value of diversity in the recruitment, selection, and training of peer mediators. *The School Counselor, 43*, 392-409.
Dean, A. V., Salend, S. J., & Taylor, L. (1993). Multicultural education: A challenge for special educators. *Teaching Exceptional Children, 26*(1), 40-43.
Deiner, P. (1993). *Resources for teaching children with diverse abilities* (2nd ed.). Fort Worth, TX: Harcourt Brace College Publishers.
Derman-Sparks, L. (1993). Revisiting multicultural education: What children need to live in a diverse society. *Dimensions of Early Childhood, 21*(2), 6-10.
Derman-Sparks, L. (1993/1994). Empowering children to create a caring culture in a world of differences. *Childhood Education, 70*, 66-71.
Derman-Sparks, L., & ABC Task Force. (1989). *Anti-bias curriculum: Tools for empowering young children.* Washington, DC: National Association for the Education of Young Children.
Desouza, E. R., & Sivewright, D. (1993). An ecological approach to evaluating a special education program. *Adolescence, 28*(111), 517-525.
Doherty-Sneddon, G., & Kent, G. (1996). Visual signals and the communication abilities of children. *Journal of Child Psychology and Psychiatry, 37*(8), 949-959.
Dunn, R., Dunn, K., & Perrin, J. (1994). *Teaching young children through their individual learning styles: Practical approaches for grades K-2.* Boston, MA: Allyn and Bacon.
Dykeman, C., Daehlin, W., Doyle, S., & Flamer, H. (1996). Psychological predictors of school-based violence: Implications for school counselors. *The School Counselor, 44*, 35-45.
Eanes, R. (1997). *Content area literacy: Teaching for today and tomorrow.* Albany, NY: Delmar.
Eddowes, E. A. (1994). Schools providing safer environments for homeless children. *Childhood Education, 70*(5), 271-273.
Edington, G. (1985). Hand puppets and dolls in psychotherapy with children. *Perceptual and Motor Skills, 61*, 691-696.
Egge, D. L., Marks, L. G., & McEvers, D. M. (1987). Puppets and adolescents: A group guidance workshop approach. *Elementary School Guidance and Counseling, 21*, 183-192.
Enright, D. S., & McCloskey, M. L. (1988). *Integrating English: Developing English language and literacy in the multilingual classroom.* Reading, MA: Addison-Wesley.
Evertson, C. M., & Harris, A. H. (1992). What we know about managing classrooms. *Educational Leadership, 49*, 74-78.
Fad, K. S., Ross, M., & Boston, J. (1995). Using cooperative learning to teach social skills to young children. *Teaching Exceptional Children, 27*(4), 28-34.
Fad, K. S., & Ryser, G. R. (1993). Social/behavioral variables related to success in general education. *Remedial and Special Education, 14*(1), 25-35.
Fall, M. (1994). Physical and emotional expression: A combination approach for working with children in the small areas of a school counselor's office. *The School Counselor, 42*, 73-77.
Ferber, J. (1996). Therapeutic teacher, therapeutic classroom. In L. Koplow (Ed.), *Unsmiling faces: How preschools can heal* (pp. 45-63). New York: Teachers College Press.
Fiore, T. A., Becker, E. A., & Nero, R. C. (1993). Educational interventions for students with attention deficit disorder. *Exceptional Children, 60*, 163-173.
Fletcher, D. (1983). Effects of classroom lighting on the behavior of exceptional children. *Exceptional Children Quarterly, 4*(2), 75-89.
Ford, D. K. (1994). Nurturing resilience in gifted black youth. *Roeper Review, 17*(2), 80-85.
Ford, D. Y., Grantham, T. C., & Harris, J. J., III (1996). Multicultural gifted education: A wakeup call to the profession. *Roeper Review, 19*(2), 72-78.
Freiberg, H. J., & Driscoll, A. (1996). *Universal teaching strategies* (2nd ed.). Boston, MA: Allyn and Bacon.
French, J. (1984). Gender imbalances in the primary classroom: An interactional account. *Educational Research, 26*(2), 127-136.
Frost, J. L. (1992). *Play and playscapes.* Albany, NY: Delmar.
Gallagher, J., Harradine, C. C., & Coleman, M. R. (1996). Challenge or boredom? Gifted students' views on their schooling. *Roeper Review, 19*(3), 132-136.

BEST COPY AVAILABLE

Gareau, M., & Kennedy, C. (1991). Structure time & space to promote pursuit of learning in the primary grades. *Young Children, 46*(4), 46-51.
Gartrell, D. (1987). Assertive discipline: Unhealthy for children and other living things. *Young Children, 42*, 10-11.
Gartrell, D. (1994). *A guidance approach to discipline.* Albany, NY: Delmar.
Gendler, M. (1986). Group puppetry with school-age children: Rationale, procedure and therapeutic implications. *The Arts in Psychotherapy, 13*, 45-52.
Gifford, R. (1997). *Environmental psychology: Principles and practice* (2nd ed.). Boston: Allyn and Bacon.
Gonzalez-Mena, J. (1997). *Multicultural issues in child care* (2nd ed.). Mountain View, CA: Mayfield.
Grossman, H., & Grossman, S. H. (1994). *Gender issues in education.* Boston: Allyn and Bacon.
Gudykunst, W., & Kim, Y. (1992). *Communicating with strangers: An approach to intercultural communication* (2nd ed.). New York: McGraw-Hill.
Guralnick, M. J. (1993). Developmentally appropriate practice in the assessment and intervention of children's peer relations. *Topics in Early Childhood Special Education, 13*(3), 344-371.
Hanline, M. F. (1985). Integrating disabled children. *Young Children, 40*(2), 45-48.
Hardman, M. L., Drew, C. J., & Egan, M. W. (1996). *Human exceptionality: Society, school, and family* (5th ed.). Boston: Allyn and Bacon.
Hendrick, J. (1998). *Total learning: Developmental curriculum for the young child* (5th ed.). Upper Saddle River, NJ: Merrill.
Hensel, N. H. (1991). Leadership giftedness: Social leadership in young children. *Roeper Review, 14*(1), 4-6.
Heward, W. L. (1996). *Exceptional children: An introduction to special education* (5th ed.). Upper Saddle River, NJ: Merrill/Prentice Hall.
Hitz, R. (1988). Assertive discipline: A response to Lee Canter. *Young Children, 43*, 25-26.
Honig, A. S., & Lansburgh, T. (1991). The tasks of early childhood: The development of self-control—Part II. *Day Care and Early Education, Summer*, 21-26.
Hopkins, S., & Winters, J. (Eds.). (1990). *Discovering the world: Empowering children to value themselves, others and the earth.* Philadelphia: New Society Publishers.
Horowitz, S. V., Boardman, S. K., & Relener, I. (1994). Constructive conflict management and coping in homeless children and adolescents. *Journal of Social Issues, 50*(1), 85-98.
Hoveland, J., Peterson, T., & Smaby, M. (1996). School counselors as conflict resolution consultants: Practicing what we teach. *The School Counselor, 44*, 71-76.
Huffine, S., Silvern, S. B., & Brooks, D. M. (1979). Teacher responses to contextually specific sex type behaviors in kindergarten children. *Educational Research Quarterly, 4*(2), 29-35.
Hunt, F. M., Mayette, C., Feinberg, E., & Baglin, C. A. (1994). Integration of behavioral consultation in an intervention setting. *Infants and Young Children, 7*(2), 62-66.
Hyun, J. K., & Fowler, S. A. (1995). Respect, cultural sensitivity, and communication. *Teaching Exceptional Children*, 25-28.
Irwin, E. C. (1985). Puppets in therapy: An assessment procedure. *American Journal of Psychotherapy, 39*(3), 389-400.
James, R. K., & Myer, R. (1987). Puppets: The elementary school counselor's right or left arm. *Elementary School Guidance & Counseling, 21*, 292-299.
Johnson, J. E., Christie, J. F., & Yawkey, T. D. (1987). *Play and early childhood development.* Glenview, IL: Scott Foresman.
Jones, E., & Derman-Sparks, L. (1992). Meeting the challenge of diversity. *Young Children, 47*(2), 12-18.
Kauffman, J. M. (1993). *Characteristics of emotional and behavioral disorders of children and youth* (5th ed.). Englewood Cliffs, NJ: Merrill/Prentice Hall.
King, E., Chipman, M., & Cruz-Janzen, M. (1994). *Educating young children in a diverse society.* Boston, MA: Allyn and Bacon.
Kistner, J., Metzler, A., Gatlin, D., & Risi, S. (1993). Classroom racial proportions and children's peer relations: Race and gender effects. *Journal of Educational Psychology, 85*(3), 446-452.
Kitagawa, M. M. (1991). When the "wrong" students come through the door. In Y. M. Goodman, W. J. Hood, & K. S. Goodman (Eds.), *Organizing for whole language* (pp. 170-182). Portsmouth, NH: Heinemann Educational Books.
Kitano, M. K. (1989). The K-3 teacher's role in recognizing and supporting young gifted children. *Young Children, 44*(3), 57-63.
Kondoyianni, A. (1997). Affective education in Greece: The self understanding of pre-school children, as projected with puppets. A qualitative research. *International Journal of Early Childhood, 29*(1), 10-18.
Koplow, L. (1996a). Play therapy as early intervention. In L. Koplow (Ed.), *Unsmiling faces: How preschools can heal* (pp. 75-88). New York: Teachers College Press.
Koplow, L. (1996b). Therapeutic technique: The tools of preschools that heal. In L. Koplow (Ed.), *Unsmiling faces: How preschools can heal* (pp. 89-103). New York: Teachers College Press.
Kostelnik, M. J., Stein, L. C., Whiren, A. P., & Soderman, A. K. (1998). *Guiding children's social development* (3rd ed.). Albany, NY: Delmar.
Kottman, T., & Johnson, V. (1993). Adlerian play therapy: A tool for school counselors. *Elementary School Guidance and Counseling, 28*, 42-51.
Landau, S., & McAninch, C. (1993). Young children with attention deficits. *Young Children, 48*(4), 49-58.
Landreth, G. L. (1993). Child-centered play therapy. *Elementary School Guidance and Counseling, 28*, 17-29.
Lovecky, D. V. (1994). Exceptionally gifted children: Different minds. *Roeper Review, 17*(2), 116-120.
Lynch, E. W. (1992). Developing cross-cultural competence. In E. W. Lynch & M. J. Hanson (Eds.), *Developing cross-cultural competence: A guide for working with young children and their families* (pp. 35-59). Baltimore: Paul H. Brookes.
Lynch, E. W., & Hanson, M. J. (1992). Steps in the right direction: Implications for interventionists. In E. W. Lynch & M. J.

BEST COPY AVAILABLE

Hanson (Eds.), *Developing cross-cultural competence: A guide for working with young children and their families* (pp. 353-370). Baltimore: Paul H. Brookes.
Mann, J. (1994). Bridging the gender gap: How girls learn. *Streamlined Seminar, 13*(2), 1-5.
Marion, M. (1995). *Guidance of young children* (4th ed.). Columbus, OH: Merrill.
McAfee, O., & Leong, D. J. (1997). *Assessing and guiding young children's development and learning* (2nd ed.). Boston: Allyn and Bacon.
McLean, J. (1992). *Assuring best practices in communication for children and youth with severe disabilities* (ED359693). Washington, DC: Education Resources Information Center.
Meloth, M. S. (1991). Enhancing literacy through cooperative learning. In E. H. Hiebert (Ed.), *Literacy for a diverse society: Perspectives, practices, and policies* (pp. 172-183). New York: Teachers College Press.
Mendler, A. (1996). Discipline with dignity: An approach for the '90s. *Learning, 1*(2), 16-17.
Miller, C. S. (1984). Building self-control: Discipline for young children. *Young Children, 40*(1), 15-19.
Miller, R. (1996). *The developmentally appropriate inclusive classroom in early education.* Albany, NY: Delmar.
Moon, S. M. (1995). The effects of an enrichment program on the families of participants: A multiple-case study. *Gifted Child Quarterly, 39*(4), 198-208.
Moon, S. M., Kelly, K. R., & Feldhusen, J. F. (1997). Specialized counseling services for gifted youth and their families: A needs assessment. *Gifted Child Quarterly, 41*(1), 16-25.
National Coalition of Advocates for Students. (1991). *The good common school: Making the vision work for all children.* Boston: Author.
Palardy, J. M., & Rodgers, M. S. (1985). An analysis of short and long-term effects of retention, assertive discipline, and basic skills instruction. *Reading Improvement, 22*, 286-289.
Pelham, W. E., & Milich, R. (1984). Peer relations in children with hyperactivity/attention deficit disorder. *Journal of Learning Disabilities, 17*(9), 560-567.
Perez, S. (1994). Responding differently to diversity. *Childhood Education, 70*, 151-153.
Peters, D. L., Neisworth, J. T., & Yawkey, T. D. (1985). *Early childhood education: From theory to practice.* Monterey, CA: Brooks/Cole.
Peterson, C. A., & McConnell, S. R. (1993). Factors affecting the impact of social interaction skills interventions in early childhood special education. *Topics in Early Childhood Special Education, 13*(1), 38-56.
Piirto, J. (1995). Deeper and broader: The pyramid of talent development in the context of a giftedness construct. *The Educational Forum, 59*, 363-370.
Pollard, D. S. (1996). Perspectives on gender and race. *Educational Leadership, 5*(3), 72-74.
Prickett, E. M., Higgins, K., & Boone, R. (1994). Technology for learning . . . not learning about technology. *Teaching Exceptional Children, 26*(4), 56-60.
Prizant, B., & Bailey, D. (1992). Facilitating the acquisition and use of communication skills. In D. B. Bailey & M. Wolery (Eds.), *Teaching infants and preschoolers with disabilities* (pp. 299-361). New York: Merrill/Macmillan.
Reid, R., Maag, J. W., & Vasa, S. (1994). Attention deficit hyperactivity disorder as a disability category: A critique. *Exceptional Children, 60*(3), 198-214.
Render, G. F., Padilla, J., & Krank, H. M. (1989). Assertive discipline: A critical review and analysis. *Teachers College Record, 90*, 607-630.
Reynolds, E. (1996). *Guiding young children: A child-centered approach* (2nd ed.). Mountain View, CA: Mayfield.
Rittenhouse, R. K., & Blough, L. K. (1995). Gifted students with hearing impairments: Suggestions for teachers. *Teaching Exceptional Children, 27*(4), 51-53.
Rothenberg, J. J., & Cassant, S. (1996). Watching and learning in multicultural classrooms. *The Educational Forum, 61*, 77-83.
Rubin, R. A., & Balow, B. (1978). Prevalence of teacher identified behavior problems: A longitudinal study. *Exceptional Children, 45*(2), 102-111.
Sadker, M., & Sadker, D. (1994). *Failing at fairness: How America's schools cheat girls.* New York: Charles Scribner's Sons.
Sadker, M., Sadker, D., & Long, L. (1997). Gender and educational equality. In J. A. Banks & C. A. M. Banks (Eds.), *Multicultural education: Issues and perspectives* (3rd ed.). Boston: Allyn and Bacon.
Saunders, B., & Chambers, S. M. (1996). A review of the literature on attention-deficit hyperactivity disorder children: Peer interactions and collaborative learning. *Psychology in the Schools, 33*(4), 333-339.
Schloss, P. J., & Smith, M. A. (1994). *Applied behavior analysis in the classroom.* Boston: Allyn and Bacon.
Schmidt, J. J., & Biles, J. W. (1985). Puppetry as a group counseling technique with middle school students. *Elementary School Guidance & Counseling, 21*, 67-73.
Scott, M. S., Deuel, L.-L. S., Jean-Francois, B., & Urbano, R. C. (1996). Identifying cognitively gifted ethnic minority children. *Gifted Child Quarterly, 40*(3), 147-153.
Serna, L., & Patton, J. R. (1997). Effective teaching practices. In E. A. Polloway & J. R. Patton (Eds.), *Strategies for teaching learners with special needs* (pp. 135-173). Upper Saddle River, NJ: Prentice Hall.
Skow, L., & Whitaker, T. (1996). It's what you say and what you do! Nonverbal immediacy behaviors: A key to effective communication. *NASSP Bulletin, December*, 90-95.
Sleeter, C. E., & Grant, C. A. (1987). An analysis of multicultural education in the U. S. *Harvard Educational Review, 57*, 421-444.
Sosa, A. (1993). *Thorough and fair: Creating routes to success for Mexican-American students.* Charleston, WV: ERIC Clearinghouse on Rural Education and Small Schools.
Strom, R., Johnson, A., Strom, S., & Strom, P. (1992). Educating gifted hispanic children and their parents. *Hispanic Journal of Behavioral Sciences, 14*(3), 383-393.
Sweeney, B., & Carruthers, W. (1996). Conflict resolution: History, philosophy, theory, and educational applications. *The School Counselor, 43*, 326-341.

BEST COPY AVAILABLE

Teets, S. T. (1985). Modifications of play behaviors of preschool children through manipulation of environmental variables. In J. L. Frost & S. Sunderlin (Eds.), *When children play: Proceedings from the international conference on play and play environments* (pp. 265-271). Olney, MD: Association for Childhood Education International.

Tomlinson, C. A., Callahan, C. M., & Lelli, K. M. (1997). Challenging expectations: Case studies of high-potential, culturally diverse young children. *Gifted Child Quarterly, 41*(2), 5-17.

Trawick-Smith, J. W. (1997). *Early childhood development: A multicultural perspective.* Upper Saddle River, NJ: Merrill/Prentice Hall.

Tucker, B., & Hafenstein, N. L. (1997). Psychological intensities in young gifted children. *Gifted Child Quarterly, 41*(3), 66-75.

Wang, M. C., Haertel, G. D., & Walberg, H. J. (1993/94). What helps students learn? *Educational Leadership, 51*(4), 74-79.

Weinstein, C. S. (1979). The physical environment of the school: A review of the research. *Review of Educational Research, 49*(4), 577-610.

Wheat, R. (1995). Help children work through emotional difficulties—sand trays are great! *Young Children, 51*, 82-83.

Winter, S. M. (1994/95). Diversity: A program for all children. *Childhood Education, 71*, 91-95.

Winter, S. M., Bell, M., & Dempsey, J. (1994). Creating play environments for children with special needs. *Childhood Education, 71*, 28-32.

Wittmer, D., Doll, B., & Strain, P. (1996). Social and emotional development in early childhood: The identification of competence and disabilities. *Journal of Early Intervention, 20*(4), 299-317.

Wolery, M., & Fleming, L. A. (1992). Preventing and responding to problem situations. In D. B. Bailey & M. Wolery (Eds.), *Teaching infants and preschoolers with disabilities* (2nd ed., pp. 363-406). New York: Merrill/Macmillan.

Wolfgang, C. H. (1995). *Solving discipline problems: Methods and models for today's teachers* (3rd ed.). Boston: Allyn and Bacon.

Wolfle, J. (1989). The gifted preschooler: Developmentally different, but still 3 or 4 years old. *Young Children, 44*, 41-48.

Wooster, J. S. (1993). Authentic assessment: A strategy for preparing teachers to respond to curricular mandates in global education. *Theory Into Practice, 32*(1), 47-51.

Wright, J. V. (1995). Multicultural issues and attention deficit disorders. *Learning Disabilities Research & Practice, 10*(3), 153-159.

York, S. (1991). *Roots and wings: Affirming culture in early childhood programs.* St. Paul, MN: Redleaf Press.

York, S. (1992). *Developing roots and wings.* St. Paul, MN: Redleaf Press.

Zima, B. T., Wells, K. B., & Freeman, H. E. (1994). Emotional and behavioral problems and severe academic delays among sheltered homeless children in Los Angeles County. *American Journal of Public Health, 84*(2), 260-264.

BEST COPY AVAILABLE

CHAPTER 4

Designing Learning Environments

KEY QUESTIONS

- *Why is the learning environment critical in promoting learning for all children?*
- *Which features interact to create the ecology of the learning environment?*
- *What is environmental competence and why should teachers develop these skills?*
- *How are continuums helpful in planning learning environments in the ECI Model?*
- *How can teachers create a print-focused environment?*
- *How can teachers integrate technological tools into the environment?*

THE ROLE OF THE ENVIRONMENT

We have known for a long time that environments influence children's development and learning. In the 18th century, Jean Jacques Rousseau advocated that children should spend time playing freely in natural outdoor environments. Educators then began to realize that by preparing the learning environment and offering guidance, teachers could better support children's development and learning. The father of the kindergarten movement, Friedrich Froebel, believed it was important to enrich learning environments for children with specially constructed toys called "gifts," which were used in prescribed ways during play activities. Working with children who were mentally retarded, Maria Montessori posited that sensory stimulation was important to children's learning. Consequently, she prepared sensory-rich toys and materials for nondisabled children's learning environments as well. Behaviorists, such as B. F. Skinner, also realized the power of the physical and social environment. Behaviorist theories heavily influenced past efforts in special education to provide controlled environments for children with learning difficulties.

Constructivists, such as Jean Piaget and Lev Vygotsky, also recognized the importance of the environment. Piaget postulated the significance of young children's playful interactions with the physical environment for their cognitive development and construction of knowledge. The social aspects of the learning environment and how they help children construct knowledge was the focus of Vygotsky's work (Morrison, 1998; Wortham, 1992, 1994). Influenced by these theorists and subsequent research, professionals working with young children respect the power of both the physical and social aspects of children's learning environments.

The learning environment is a critical component of ECI programs. Physical design of indoor and outdoor environments influences the variety and type of learning opportunities available. Through environmental research, we know that elements such as noise, light, space, and density affect the quality of the learning environment, ultimately influencing children's behavior, social interaction, and successful participation in learning activities.

CONCERNS AND CHALLENGES

The inclusive education movement focuses on the potential of learning environments for stimulating children's social and academic learning. Rather than focusing on the homogeneity of groups by asking children to conform to whole-group instruction, proponents of inclusive approaches are asking teachers to create learning environments where children with diverse needs and abilities will be more likely to flourish (Wang, Reynolds, & Walberg, 1994/1995). Some concerns about the learning environment address a perceived tendency of teachers to overdecorate; some fear that flashy decor is meant to amuse children rather than provide a suitable backdrop for learning (Katz & Chard, 1989). Younger children appear to be particularly sensitive to both the beneficial and detrimental characteristics of the learning environment (Weinstein, 1979). Young children have had fewer opportunities to

learn how to adapt to the negative influences and stressors in the environment, such as noise or crowding (Altman & Wohlwill, 1978). Therefore, it is even more critical for teachers in ECI programs to recognize influences, especially negative ones, in the learning environment.

Complex Ecology

The learning environments of ECI programs present an extremely complex ecology. The diversity of the group and the wide range of children's abilities make dealing with personal characteristics a challenge. When these characteristics are combined with physical features of the environment and a social-organizational structure that merges multidisciplinary influences and teachers with various teaching styles, the complexity becomes obvious.

School Decay

The physical circumstances of many urban schools and facilities that house early childhood programs may present additional challenges. In 1991, the Carnegie Foundation reported a clear trend, favored by families, toward preschool-age children being served in public school facilities. Twenty percent of all Head Start programs are on school campuses, and public school programs for 4-year-olds have quadrupled in a decade (Boyer, 1991). Unfortunately, many of these campuses are aging and offer inadequate support for the early education of children. Unhealthful conditions, disrepair, scarcity of space, and a lack of supplies are rampant (Piccigallo, 1989). While some believe that what happens in a learning environment is more significant than the characteristics of that environment (Hayes, 1986), others disagree. Piccigallo (1989) argues that comprehensive renovation of dilapidated urban schools is a fundamental step toward education reform and improving children's academic achievement. Citing the opinions of school reform advocates John Goodlad and Charles Silberman, as well as major national reports on the state of American schools, Piccigallo contends that the health and learning of children is jeopardized by decaying school environments. Futhermore, he alleges that dismal school facilities are not conducive to attendance, and that they bespeak a message of apathy and neglect that can undermine children's feelings of self-worth.

Designed for Older Children

Increasingly, younger children are being served on school campuses designed for older students. Safety and comfort are challenges in schools designed for older children. Steep staircases, high windows and bulletin boards, hard floors, and clustered bathroom facilities all contribute to difficulties for young children, especially for those with physical challenges. Lucas and Thomas (1990) contend that we must solve these problems if we are to succeed with inclusion.

GOALS

In ECI programs, learning environments, both indoors and outside, are planned and consciously monitored to promote the inclusion of all young

children. Planning focuses on providing a safe, accessible learning environment that imparts a sense of community and acceptance among young children. Such an environment promotes equity of opportunity for all children, regardless of their culture, language, gender, or abilities. Learning environments in ECI settings support a full range of learning opportunities planned by the teacher to promote individual challenge and success.

Understand the Learning Environment As an Ecology

Teachers can begin to use the physical elements of indoor and outdoor settings to enhance the learning of all children when they understand the learning environment as an ecology of interacting influences. Physical aspects alone cannot determine children's educational achievement. The learning environment is a complex ecological system composed of three major categories of characteristics and features that interact with one another to influence learning: 1) children's personal characteristics, 2) the learning environment's physical features, and 3) social-organizational climate. Personal characteristics include age, gender, experiences, attitudes, personality, and other traits that are either inherited, acquired, or developed through social and cultural transmission. Climate, design, noise, light, density or crowding, and size of the room or outside area are some of the physical features that influence learning. Social-organizational aspects, such as curriculum, approaches to teaching, and rules, can interplay with the other two categories to affect children's learning-related attitudes and behaviors (Gifford, 1997).

It is necessary for teachers and other professionals to view the learning environment as an interactive system of variables, a habitat for children (Weinstein, 1979), rather than simply architecture. Research indicates that controlling the host of variables is difficult. Relatively minor modifications to classroom design can lead to marked changes in children's learning behaviors and their interactions with materials (Gifford, 1997; Weinstein, 1979). Consequently, teachers must proceed cautiously. While some environmental modifications could increase children's success and achievement, others might have deleterious effects.

Create Geographical Matches

Matching the classroom geography to teaching aims, children's needs, and teachers' instructional styles can prevent difficulties and enhance learning. Creating different spaces in the room enables teachers to match the learning tasks and groupings of children to the physical arrangements. For example, clusters of four individual desks in a 2nd-grade classroom is an arrangement that lends itself to cooperative learning activities. The same arrangement can be distracting and counterproductive, however, when children are working on independent tasks. By arranging the room with areas for large groups, cooperative small groups, and individual or private spaces, children and teachers will have the flexibility to match their work and play to suitable geographical spaces (Lucas & Thomas, 1990).

Synchronize Classroom Geography and Teaching Styles

At least one study has found a relationship between teaching styles and a teacher's

preferred classroom layout. Classroom arrangements that place teachers in a position of control were chosen by education students who had a high need for control. Conversely, education students with low needs for control selected designs in which teacher control was less obvious. This study raises questions about the consequences of classroom designs on teaching styles and on teacher effectiveness (Feitler, Weiner, & Blumberg, 1970). We do not know the ramifications of teachers, either consciously or unconsciously, designing classroom environments according to their interpersonal needs or preferences, rather than children's learning needs, styles, and preferences.

Can environmental designs influence the kinds of strategies and accommodations teachers choose to implement in inclusive settings? One study of teachers who were including children with learning disabilities in their classrooms reported a disparity between teacher perceptions regarding the desirability of different teaching strategies and the actual use of these strategies. Comparing survey responses to teachers' actions in the classroom, investigators found that teachers considered using more teaching strategies and accommodations than they actually implemented. The investigators concluded that training might help teachers use strategies they perceived as desirable, but failed to implement (Schumm, Vaughn, Gordon, & Rothlein, 1994). It also seems possible that certain characteristics of the learning environment could limit or inhibit the kinds of instructional strategies teachers believe they can apply.

The possibilities of environmental arrangements influencing implementation decisions appear plausible considering the reports, cited in Chapter 5, that whole-group approaches to instruction are typical from kindergarten through, at least, the elementary grades. Classrooms arranged for whole-group instruction are probably less conducive to supporting a broader range of strategies and accommodations. If teachers are trained to design environments that afford more flexibility, perhaps they will be more inclined to consider using a greater variety of teaching strategies and individual accommodations. Of course, empirical research is needed to establish whether or not such correlations between environmental arrangements and implementation of teaching strategies actually exist. For the present, however, it may be wise to incorporate methods of designing or restructuring learning environments into teacher training.

Provide Accommodative Learning Environments

A major goal of environmental design for ECI programs is to provide learning environments that have flexible, rather than static, features. While some physical features of the inclusive learning environment may remain static or unchanged (Desouza & Sivewright, 1993), many features are adjustable to allow for changes and adaptations to accommodate individual children. The goal of manipulating the learning environment in ECI settings is to create interactions of variables and characteristics within the learning ecology, when such changes will facilitate learning. This means that teachers modify or restructure the physical environment, as well as the curriculum or teaching strategies, to meet learners' changing needs (Lucas, 1990). Accommodative environments for ECI programs support the social interaction and learning of a specific, heterogeneous group of young children. Consequently, as

group membership changes, accommodative learning environments can be adjusted to meet the new or different needs of young children. Physical environments are flexible in design, to allow teachers to use various teaching strategies and adaptations to accommodate individual children.

Jacob

Jacob is a kindergartner who has cerebral palsy and is hard of hearing. He uses sign language for communication and uses a wheelchair or a walker for mobility. Jacob's teacher has posted pictures of signs for the alphabet, colors, and numerals. She made sure that these posters are at Jacob's eye level when he is seated in the wheelchair. She also rearranged furniture to provide clear pathways throughout the room. Jacob uses an adaptive floor chair when he joins his peers on the floor for story time, because sitting in the wheelchair during this activity isolates Jacob from the group. His teacher takes one of his adaptive chairs to the art room when he is scheduled for art class. He needs another type of adaptive chair for music. Jacob can use his walker to get to the library, but he must use his wheelchair to travel to the outdoor playground. Jacob's adaptive equipment, and the steps taken by his teacher to accommodate his needs in the learning environment, increase Jacob's overall participation in classroom activities.

PREPARING TEACHERS FOR THEIR ROLE

As a result of the Americans With Disabilities Act (ADA), most teachers are aware of the detrimental effects that physical barriers in learning environments can present to children with physical challenges. Once the obvious physical barriers and safety hazards are removed, however, teachers should remain alert to additional effects that environmental factors can exert.

Raising the Environmental Consciousness of Teachers

Unfortunately, many teachers lack an awareness of research-based information that could help them develop their consciousness of environmental influences in early childhood settings. As recently as 1987, national guidelines encouraged teachers of toddlers to ensure that "the room is cheerful and decorated at the children's eye level with pictures of faces of people, friendly animals, and other familiar objects." An inappropriate toddler environment was described, in part, as "areas [that] are dingy and dark, decorations [that] are at adult eye level, or are too syrupy and cute" (Bredekamp, 1987, p. 44). While some of the elements in these descriptions may be valid, the subjectivity is fairly typical of approaches that often are used when designing and decorating early childhood settings. Teachers generally rely on their perceptions, or those of others, regarding what young children need or prefer in early learning environments. Unfortunately, these opinions often are based primarily on tradition, rather than on well-designed empirical research. Worse still, some early childhood settings are decorated to please adults, rather than children, in an effort to attract and maintain enrollment.

While some design traditions have stood the test of time and may prove useful,

others are based on little more than innovation. A few years ago, for example, filling an antique bathtub with pillows and placing it in a library corner was a popular environmental feature of many early childhood classrooms. While this environmental strategy may encourage some children to read, a child in a wheelchair would not have independent access to this option. Other arrangements, such as a small sofa or a cluster of upholstered chairs with pillows, certainly can serve the same purpose and allow the child who is physically challenged to read alongside his peers. Teachers in ECI programs should use available empirical evidence to plan environmental designs, cautiously evaluating any environmental changes to ensure that all children benefit. When the goal is to include all children and to create a learning environment that supports each child's success, decisions affecting the topographical features of the learning environment must be scrutinized.

Increasing Teachers' Environmental Competence

From the perspective of environmental psychologists, "environmental competence" refers to one's orientation toward a range of environmental settings, from indoor classrooms to outdoor environments, including wilderness sites. Knowledge and skills related to environments, and a desire to gain more information about environments, are necessary components of environmental competence. A person's environmental competence can be increased through either formal or informal training (Gifford, 1997).

The multidimensional concept of "environmental competence" proposed by Fritz Steele in 1980 could be a useful framework for training teachers to use the physical learning environment as a powerful tool for inclusion. Steele delineates three varieties of environmental competence:

- personal awareness of one's own skills for perceiving, judging, or evaluating an environment
- knowledge of surroundings, including technical information about environments
- practical skills related to the use of environments.

Enhancing personal awareness. When teachers accurately perceive the features and characteristics of the learning environment, they may be better able to create effective matches between children and the environment. Teachers need to be aware of temperature, space, the amount of visual stimuli, and noise levels if they are to gauge their effects on children. Furthermore, teachers in ECI setttings must be conscious of how their personal attitudes affect the way they arrange learning environments. Physical settings should support multicultural orientations, rather than reflecting only the teacher's own culturally influenced preferences.

Increasing knowledge of physical settings. Environmental competence includes being able to find resources that offer new information and technical knowledge about environmental design (Steele, 1980). With this knowledge, a person might be able to distinguish among different types of lighting and use environmental design to exert a positive influence. The design of school settings and decisions

regarding space allocation usually are made by managers, who do not consult teachers (Gifford, 1997). When teachers are not involved in such decisions, they may be forced to contend with changes that limit their options for using the environment as a tool for achieving inclusion. If teachers increase their knowledge of physical settings, they will be better equipped to propose changes and suggest alternative designs and uses. Knowledgeable teachers can serve more effectively as advocates for the kinds of learning environments that encourage and support inclusive approaches in early childhood education.

Developing practical environmental skills. Competence in matching activities and location, and skill in personalizing a setting, are two practical environmental skills (Steele, 1980). For teachers in ECI settings, such matching may involve either choosing a good place in the classroom or outdoor environment for a teacher-guided learning activity to take place, or arranging learning materials in a way that allows children to initiate learning activities independently. To effectively match activity and location, teachers must consider the abilities of children, the characteristics of the task, and the features of the environment.

Steele (1980) also proposes that an individual's skill in adding personal touches to an environment has an important influence. Through personalization, a teacher can create an atmosphere of acceptance in inclusive learning environments (Winter, 1994/95). Rather than adding items that reflect the *teacher's* personality, however, an environmentally competent teacher views the classroom environment from each child's perspective and adds details that make individual children feel welcomed and comfortable (York, 1992). Displaying children's artwork is one practical and effective way of promoting children's sense of belonging and ownership of their learning environment. These steps set the stage for the guidance of young children toward social and emotional growth and development (Marion, 1995).

Mediating the Learning Environment

Teachers in ECI programs play a critical role as mediators in the child's learning environment. Providing a wealth of materials does not by itself ensure an appropriate curriculum or maximal use of materials. The ways teachers and caregivers present materials to children and encourage them to freely explore and play also are vital (Miller, 1996), as they influence the development of personality, interests, and physical and academic skills.

A Canadian study reports that gender-typed play is encouraged by the kinds of toys and play materials parents select for their children. Toys chosen for girls predisposed them to acquiring the nurturing, interpersonal skills traditionally expected of women. On the other hand, toys given to boys helped them to acquire skills traditionally associated with males, such as spatial skills (Pomerleau, Bolduc, Malcuit, & Cossette, 1990). Providing a full range of play materials is a step toward gender equity. Unless the teacher encourages the use of play materials across the full range of options, however, children may continue to select only those items that are familiar (Sadker & Sadker, 1994). By involving girls in block building, science experiments, and computer activities, teachers can help girls develop a broader range of

skills and abilities. Conversely, boys should be encouraged to engage in dramatic play and expressive arts activities, in addition to other activities.

Planning for the individual needs of all children and maintaining a consistent and safe learning environment are fundamental responsibilities of teachers (Wolfgang & Wolfgang, 1992). Another critical responsibility is interacting with children as a "coach" during their play activities (Smilansky & Shefatya, 1990). This role is particularly important to maintaining the safety and health of all children, especially when those with disabilities are included. When teachers participate in training programs that emphasize safety, they enhance their effectiveness as "coaches" and support the safety of infants (Ross, 1992), preschoolers (Bruder, 1993; File & Kontos, 1993; Finn-Stevenson & Stevenson, 1990), and children with severe multiple disabilities (Eichinger & Woltman, 1993).

SETTING THE STAGE FOR LEARNING AND INCLUSION

Environmental psychologists and others who study educational settings contend that the physical aspects of the learning environment are just as important to consider as other aspects of the learning ecology, such as the teacher's skills and methods (Rosenfeld, 1977; Weinstein, 1981). Rosenfeld (1977) compares the preparation of learning environments to the task of a scene designer preparing a theatrical set. Just as the scene designer manipulates the lighting, colors, spatial arrangements, furnishings, and other variables of the stage, teachers can attempt to exert some control over the variables that compose the learning environment of the classroom. The following sections outline some basic information about how physical variables and conditions in the learning environment can influence children's development and learning. This information is intended to help early childhood teachers gain better results from their environmental design efforts.

Learning Environments "Speak" to Children

Physical elements of learning environments help create a psychological climate or ambiance. Whether the message is overt or symbolic, the physical environment communicates information about the kinds of behaviors and performance expected of children (Carta, Atwater, Schwartz, & Miller, 1990; Gifford, 1997; Weinstein, 1979). Teachers may deliberately plan some of the messages. Signs posted in the room can use print, icons, or pictures to indicate rules, such as the number of children who can occupy a learning center at any given time. If signs depict images of children complying with the rules or state the desired behavior in positive terms, the underlying symbolic message is positive and encouraging.

Teachers convey the message that they value children's work when they neatly display samples of each child's work in a designated area of the room. If children's work is not displayed or items are haphazardly posted, the message conveyed is one of devaluation. The physical learning environment also can indicate acceptance of children's diversity when displays include printed messages in each child's first language (Goodman & Curry, 1991), as well as pictures of children and families that

are similar to those of class members (Derman-Sparks & ABC Task Force, 1989; York, 1991). Children with physical challenges feel accepted and valued when teachers adjust the physical environment to make all areas, equipment, and materials accessible (Winter, Bell, & Dempsey, 1994).

Physical Variables Can Facilitate or Impede Learning

Physical variables such as size, lighting, acoustics/noise, density/crowding, color, and climate have been studied for their effects on children's behavior, learning, and health. Sometimes the influence of such variables is direct. For example, someone entering the room can distract the children's attention from a story the teacher is reading. In other cases, the influence exerted may be symbolic. When a classroom is dirty or in disarray, a lack of concern for children is symbolically conveyed. This symbolic message may work to hinder children's learning (Weinstein, 1981).

The first step to using environmental variables more effectively is recognizing what types of physical attributes and variables are often present in learning environments and how they may influence children's behavior and learning. This means that teachers must endeavor to increase their own environmental competence.

> ***Story Circle***
>
> *Ms. Herrera gathered the children in a circle on the rug to listen to a story and discuss the story line. In the middle of the story, the air conditioner in the window behind Ms. Herrera switched on, noisily. Children moved closer toward Ms. Herrera to hear her voice better. The teacher strained her voice in an attempt to be heard above the mechanical noises. She couldn't hear children's responses to her questions and some children obviously were distracted. Finally, Ms. Herrera moved to a quieter part of the room. Unfortunately, time was lost in relocating the children and settling them down to listen. Planning for environmental variables when planning the lesson could have prevented this loss of learning time.*

Five Basic Principles for the Function of Environmental Variables

Five basic principles about the function of environmental variables can guide teachers: 1) the presence or absence of an environmental variable can affect learning, 2) single or combined interactive effects may be exerted by variables, 3) the effects of different types of environmental variables within the same category of variables are not always the same, 4) the effects of factors in the learning environment can be immediate, delayed, or cumulative, and 5) the effects of environmental variables always must be interpreted by considering the contexts in which these effects occurred.

1. Presence or absence of variables. The presence or absence of features such as windows (Collins, 1975) and natural sunlight (Dunn, Krimsky, Murray, & Quinn, 1985) has been examined to determine how these variables affect learning and behavior. In another case, the presence or absence of physical features and materials related to literacy, such as a library corner, were examined in early childhood classrooms (Morrow, 1982; Morrow & Weinstein, 1982). One experimental study of 13 kindergarten classrooms found evidence of a cause-and-effect relationship between the

existence of a library corner and children's voluntary use of literacy materials during free play. In classrooms with established library corners, children's literature activities increased (Morrow & Weinstein, 1982).

Applying this principle, teachers who are designing or evaluating their learning environments must consider not only the variables and conditions that are present, but also those that are absent. The addition or deletion of particular features or variables in a classroom may be needed to support the learning of some children in ECI settings. For example, when children with certain disabilities are included, such as those with physical challenges or sensory impairments, the addition of adaptive equipment may be needed.

*2. **Single or combined interactive effects of variables.*** Different effects or differences in the intensity of the effects of variables may occur when variables are studied either separately or together. A study involving two common features in the decor of a nursery school setting exemplifies the different effects variables can have alone or in interaction with other environmental features. Researchers examined the type of flooring and the presence of partitions to determine their effects, both singly and combined, on the interactions of teachers and children (Neil, 1982). The investigators found that teachers spent more time directly engaged in educational activities with children when floors were carpeted. When partitions or screens were used in the room, the teacher's involvement in administrative tasks increased and direct involvement in educational activities with children decreased. The combined effects of the presence of carpeting and the absence of partitions produced the highest levels of educational interaction between teachers and children.

*3. **Kinds of variables and degree of variation or change.*** Variables such as light and noise actually differ in kind or type, and the effects of different types within the same category of variables are not always the same. The category of light, for example, includes natural sunlight, ultraviolet, incandescent, and two types of flourescent lighting, cool-white and full-spectrum. Studies examining exposure to these various types of lighting suggest that different effects on children's behavior, health, and cognitive performance are possible (Fletcher, 1983). Some studies suggest that cool-white flourescent lighting may be correlated to higher levels of hyperkinetic activity (Mayron, Ott, & Amontree, 1975; Painter, 1976/77). Interestingly, Mayron et al. (1975) also found a higher incidence of dental caries (tooth decay) among 1st-graders who were exposed to the cool-white lighting conditions in their classrooms for a 5-month period. This finding remains unsubstantiated, however, and Mayron et al.'s study has been criticized for methodological flaws. Other health-related findings have been reported from studies with better controls, leading at least one group of Swedish investigators to recommend that classrooms have windows or full-spectrum lighting (Kuller & Lindsten, 1992).

Some research studies indicate that the degree of variation or change in environmental variables sometimes produces different effects. Certain studies suggest that the amount of light in a room affects reading performance. It appears that some children read better in dim lighting, whereas others show higher reading performance in brightly lit settings (Dunn et al., 1985; Riding & Pugh, 1987). Noise is another variable that should be considered in terms of degrees of change. Continued levels of noise can provoke different effects than occasional intense outbursts (Gifford, 1997).

4. Immediate, delayed, and cumulative effects of variables. A noisy overflight of an aircraft can result in an immediate disruption of children's attention. Some effects of conditions in the learning environment may not be as immediately evident, however; effects can be delayed or cumulative. Evidence suggests that the effects of indoor lighting may not be known until children have been exposed for weeks. Additionally, young children near sources of frequent, loud noise, such as trains or overflights of aircraft, do appear to react with lower psychomotor or cognitive performance, compared to children who are in quieter learning environments (Gifford, 1997).

Teachers can increase their vigilence when any changes in the physical setting of the ECI classroom occur. It may be unwise, however, to make quick assumptions that the changes have brought about either positive or negative effects. Conversely, it may be just as unwise to assume that no effect has occurred if immediate results are not observed. Rather than leaping to early conclusions, teachers must maintain alertness to see if immediate effects are sustained. If immediate effects are not observed, teachers should, at least, entertain the possibility that the effects may be delayed or cumulative. Consequently, teacher-initiated environmental changes should be deliberate and slow. Modifying several aspects of the environment at once can confound results, making interpretation difficult. Collecting base line data prior to a planned modification of the environment, and periodically after implementation, can help teachers more accurately judge the effects of their modifications.

5. The context of effects. It is vital to consider the context of the situation when physical variables or features are manipulated in both indoor and outdoor early childhood settings. Evaluation of the possible effects of environmental variables or conditions must be tempered by recognition that various contextual conditions can influence the outcomes of any environmental manipulation.

Environmental psychologists have come to believe that physical aspects of learning environments do not exert universal effects on children's learning and behavior. Instead, differential effects are produced by the interaction of the physical features of the setting with the social and instructional contexts of the learning environment's ecology (Weinstein, 1981). For example, Fagot (1977) suggests that crowding in preschools does not appear to exert a direct effect on children's behavior, but rather changes the social context of the learning environment. Crowding causes teachers to be more directive and to regulate children's social groups (Fagot, 1977). One must be mindful that ECI classrooms represent very unique and dynamic contexts for learning. Children in these classrooms are characteristically diverse, with a wide range of ability levels. The group also may be linguistically diverse and represent multiple chronological and developmental ages. Consequently, teachers must be aware that the physical aspects of the learning environment are likely to produce differential effects on individual children.

APPLYING RESEARCH IN INCLUSIVE LEARNING ENVIRONMENTS

While changing the physical environment is probably an unfamiliar strategy to many teachers, it can be a convenient and highly effective strategy

for promoting inclusion. Through environmental accommodations, teachers can meet children's individual needs without singling out specific children (Lucas, 1990). Modifications to the environment are natural interventions and are considered the least intrusive method of intervening with young children in inclusive early childhood settings (Bailey & McWilliams, 1990). The following sections suggest steps teachers can take to create and maintain effective learning environments in ECI settings.

Design, Modify, and Evaluate Environments Collaboratively

The hallmark of ECI programs is the high degree of collaboration among teachers, families, and specialists. Consequently, designing, changing, and evaluating the physical learning environment is best considered as a team effort. Collaborative planning brings different perspectives to structuring the environment and can help ensure better matches between the children and the physical geography of the learning environment. Team planning also gives teachers and specialists an opportunity to discuss how changes may affect the quality of their teaching. Negotiations among team members can help achieve a learning environment that supports the various methods and styles that teachers and specialists use (Lucas, 1990). Collaboration with physical therapists, occupational therapists, and other specialists can ensure the safety of children, especially those with physical challenges, in play and learning environments (Eichinger & Woltman, 1993). Multidisciplinary teams provide expert knowledge for evaluating individual needs, and establish priorities so that learning environments can support the development of all children (Raschke, Dedrick, & Hanus, 1991).

When planning teams participate in staff development activities to increase their environmental competence, their decisions are likely to have a greater impact. A combination of training by authorities and assigning study group exercises will help teams increase their competence and stay abreast of new research developments. Establishing an ongoing flow of information from reliable sources can improve the design, modification, and evaluation of learning environments.

Plan and Evaluate Using a Multidimensional Approach

Viewing the physical environment of an ECI classroom as a multidimensional totality may help teachers plan and evaluate the design of the room. In addition to considering each aspect of the physical learning environment separately, all areas of the room, including floors, walls, ceiling, furnishings, and air space, are viewed as an integrated whole. Using Rosenfeld's (1977) image of a stage designer, when teachers step back and try to perceive the room as a whole, they can better understand the kind of reaction the classroom may evoke in children. From this perspective, teachers may find it easier to predict the possible effects that changing individual variables or features may have. Undoubtedly, each change will affect the relationships of variables in the total classroom environment. Adopting a multidimensional approach to environmental design and intervention reminds teachers to remain aware of interrelationships among variables.

Use Continuums in Designing Environments

Beginning in the late 1960s, Elizabeth Prescott headed a large research project, *Assessment of Child-Rearing Environments: An Ecological Approach,* aimed at examining the quality of child care environments. Prescott and her associates recognized the multidimensional character of physical and social learning environments for young children. These investigators identified seven major dimensions of early childhood environments, describing each as continuums and applying them to both the physical aspects of early childhood environments and social aspects, namely the teacher. The dimensions are as follows:

- Softness/Hardness
- Open/Closed
- Simple/Complex
- Intrusion/Seclusion
- High Mobility/Low Mobility
- Risk/Safety
- Large Group/Individual (Jones, 1977; Prescott, 1984)

Prescott's dimensions have been recommended widely for designing and evaluating early childhood environments. This conceptualization helps teachers to appreciate the complexity of an early childhood environment as a multidimensional ecology. Continuums also give teachers an understanding of the fluidity and malleability of the environment, implying that teachers can exert some level of control to mediate environmental influences. Finally, Prescott's continuums provide a tool for analyzing and evaluating the ecology of early childhood environments.

While the continuums that evolved from the Prescott research project still hold true, the complexity of early childhood settings has increased in recent years. Serving an increasingly diverse population of children with a wide range of abilities seems to warrant attention to dimensions not originally addressed by the Prescott project. Therefore, this author proposes four additional dimensions to consider when designing ECI environments:

- Accessible/Inaccessible
- High Stimulation/Low Stimulation
- Predictable/Unpredictable
- Novel/Familiar

Accessible/inaccessible. Ensuring that equipment, materials, and areas of the classroom setting or playground are accessible to all children is critical to inclusion efforts. For all children, accessibility is fundamental to fostering independence. Accessibility gives children choice and control over their learning; children gain in their ability to assume responsibility and accept the consequences of their decisions (Kostelnik, Stein, Whiren, & Soderman, 1993). The degree of the child's accessibility to teachers and other staff affects the child's chances for success on a social perspec-

tive. Teachers in ECI settings play key roles in ensuring a high degree of accessibility. Teachers serve as a mediators between children and the environment, as socializing agents, as facilitators of learning, and as collaborators with other professionals and families (see Chapter 5). In each of these roles, teachers in ECI settings strive for high accessibility and interaction. Maintaining low teacher-child ratios is one way to increase the accessibility of teachers to children.

High stimulation/low stimulation. In ECI settings, the amount and kind of sensory stimulation provided is carefully planned to match the needs of individual children. The amount of stimulation the social environment provides also is considered as part of this dimension. Teachers in ECI settings strive to match the kind and amount of stimulation to the needs of individual children (Miller, 1996; Sears, Carpenter, & Burstein, 1994; Udvari-Solner & Thousand, 1995).

Predictable/unpredictable. The degree of predictability the environment provides is another continuum that takes into account individual children. Children who are blind or visually impaired, as well as children with autism, may need greater predictability if they are to function successfully (Deiner, 1993). As younger children also require a more predictable environment for a sense of security, they are less likely to be threatened by gradually introduced changes (Kostelnik et al., 1993). The social aspects of the environment also can be evaluated in terms of predictability. Time schedules and the consistency of rule enforcement are aspects of the social environment that are related to this dimension (Kostelnik et al., 1993; Marion, 1995).

Novel/familiar. Introducing novel materials and experiences stimulates children's curiosity and motivation to learn. Understanding of other cultures can be promoted when novel items from various cultural heritages are provided. On the other hand, more familiar items enable children to link new information to their prior knowledge. Additionally, familiar items and decor that personalize the learning environment can help children feel welcomed and comfortable (Derman-Sparks & ABC Force, 1989; Winter et al., 1994; York, 1992). Introducing children to people of different cultures is a way to add social novelty. Visitors can be invited to the ECI setting, while field trips provide opportunities for children to meet people in their community contexts (Seefeldt, 1997). Media and technology offer unlimited possibilities for introducing new people and cultures (Winter, 1994/95).

Stay Within Moderate Ranges of Intensity and Stimulation

When planning lighting, acoustics, density, and other physical aspects, research suggests that teachers should aim for classroom design and decor that provide a moderate range of intensity and stimulation. Research indicates that the general illumination level of classrooms, under ordinary circumstances, should be kept in a moderate range of intensity (Dunn et al., 1985; Fletcher, 1983). Research also implies that teachers should limit the visual displays, such as posters, charts, and pictures. Gifford (1997) reports evidence that a high degree of visual complexity in the decor of a classroom may hinder children's learning.

Opt for Flexible, Adjustable Features

While avoiding extremes and choosing moderate levels of light, noise, visual stimuli, and other variables is a prudent general rule, some flexibility is a good idea. For instance, being able to adjust a room's lighting to somewhat higher or lower levels of intensity may be advantageous for individual children or in varying circumstances (Dunn et al., 1985; Riding & Pugh, 1987). Dunn et al. (1985) suggest equipping different areas of the room with moderate variations in illumination and allowing children to choose the level according to their preferences. Lighting preferences have been correlated to the age of the child and achievement levels. Younger children, compared with older students, seem to prefer lower illumination levels. Interestingly, poorly illuminated areas are frequently chosen as sites for studying and learning by underachieving children. Ensuring adequate lighting in home and school study areas may improve the performance of these children (Dunn et al., 1985). Children with visual impairments also may differ in their lighting requirements (Deiner, 1993; Oseroff, Koorland, & Maratea, 1987). The capability to adjust other features in the classroom, such as temperature, acoustics, and density, also may help create more effective learning environments.

Balance Safety and Challenge

Ensuring safety and providing appropriate levels of challenge are key concerns in inclusive early childhood play and learning environments. Provisions for the safety of all children must undergird decisions about the use of indoor and outdoor spaces, the kinds of equipment and materials included, and the levels of supervision required. From a foundation of safety, all children can be free to accept challenges and take risks while exploring their indoor and outdoor learning environments. Thus, a careful balance must be achieved between safety and challenge. While inclusive early childhood environments must be appropriate for the age of children and their individual characteristics, opportunities for appropriate levels of challenge must not be sacrificed by overzealous attention to safety. Challenges are needed to provide excitement and stimulate problem-solving skills and creativity. Offering appropriate levels of challenge in balance with provisions for safety creates developmentally appropriate early learning environments that enhance the growth and development of all children (Winter et al., 1994).

Statistically, in the United States, young children (from birth through 3) are more likely to suffer injuries than older children are. Not surprisingly, toddlers are the most likely age group to have an accident. Boys are more accident-prone than girls, and children of single, unemployed mothers are also at a higher risk of injury. The leading cause of injury to children results from falls (Taylor, 1993). Surveys conducted by the American Alliance for Health, Physical Education, Recreation and Dance reveal that over 60 percent of the 200,000 playground injuries reported each year were attributed to falls from play equipment (Bruya & Langendorfer, 1988; Thompson & Bowers, 1989; Wortham & Frost, 1990). Consequently, high priority must be given to the proper installation and maintenance of resilient materials in the fall zones under play equipment, especially climbers. Installing recommended

depths of sand or shredded bark, or using manufactured resilient surfaces, can prevent serious injuries or death. While pea gravel can be used on playgrounds for older children, authorities caution that it can be hazardous in infant and toddler play areas (Frost, 1992). Guidelines to assist schools and other facilities for children in designing and maintaining safe indoor and outdoor environments for children are available (American Public Health Association & American Academy of Pediatrics, 1992; Frost, 1992; Frost & Sweeney, 1996; National Academy of Early Childhood Programs, 1991; U.S. Consumer Product Safety Commission, 1994).

While such guidelines are helpful, they may be insufficient by themselves. For instance, the U.S. Consumer Product Safety Commission guidelines do not address the kinds of adaptations that may be needed to ensure the safety and inclusion of young children with disabilities. Therefore, a critical second step for teachers in ECI settings is to approach safety from the standpoint of individual children. Frost (1992) suggests that some children with physical challenges may need provisions to increase their mobility and access in play areas. Indoors, these children may benefit from designs that offer plenty of open floor space, which promotes freedom of movement (American Public Health Association & American Academy of Pediatrics, 1992; Frost, 1992). Other children may need different measures to ensure their individual, and their classmates', safety. For example, one kindergarten teacher found that when David, a child with emotional disturbances and aggressive behaviors, was included in her classroom, she could not store scissors in the art center, and she had to supervise the block area more closely. A teacher in a multiage primary class removed tables with sharp edges and widened the entrances to learning center areas to better accommodate Elena, a student with cerebral palsy. Elena was able to walk with the aid of a brace on her leg, but her movements were awkward and her balance was unsteady. The teacher's precautions lessened the chance that Elena would be injured.

In most cases, modifying learning environments to ensure the safety of individual children requires a few simple steps, as David's and Elena's cases illustrate. In some cases, however, measures needed to modify the learning environments to ensure safety are time-consuming and can require additional financial expenditures. The case of Jessica is a good illustration:

Jessica

Jessica and other children who are deaf or hard of hearing were included in early childhood classrooms on a neighborhood public elementary school campus. These children had undergone delicate and somewhat risky surgical procedures to insert cochlear implant devices designed to aid their hearing. Just as the school was to release a call for bids on replacing worn playground equipment, Jessica's family alerted the school to the potential harmful effects of static electricity on the cochlear implant devices. Jessica was supposed to avoid playing on plastic playground equipment that could accumulate electrostatic charges.

Consulting with the manufacturer of the cochlear implant device, the school principal discovered that many other surfaces and equipment in the school were potential sources of static electricity that could damage the speech processors of

the cochlear implant devices and necessitate surgical replacement. Teachers were immediately asked to take precautions with plastic play equipment, such as gymnastic mats, plastic wheeled vehicles, computer and TV screens, and other play items. Synthetic dress-up clothes were replaced with garments constructed of natural fibers. Since static electricity is less likely to be generated when humidity is high, teachers monitored humidity levels in classrooms and took steps to increase humidity when levels dropped. The call for bids on the playground equipment was changed when it was determined that wooden and metal equipment was safer than the plastic and resin-coated playground equipment originally described in the call (Cochlear Corporation, 1996). Wooden climbing structures and metal slides (with canopies to guard against the dangers of heated metal on sunny days) were soon installed, allowing Jessica and the other children with cochlear implants access to play opportunities with their nondisabled classmates.

Families and teachers worked together to procure replacement items and to modify indoor areas and the playground. Businesses and individuals in the community helped sponsor some of the playground modifications that were beyond the school's budget. The school and the community were united in their commitment to ensure that all children in the school were afforded access to safe play and learning environments.

While taking precautions for children with cochlear implants may not be necessary in all ECI settings, it clearly illustrates an important point. Schools and facilities must cooperate with families and the community to ensure children's safety, while also providing appropriate challenges. Families often have vital information about children's safety needs. Consequently, teachers and schools must develop rapport and establish lines of communication with families so that pertinent information can be relayed.

Design Organized Learning Environments

An organized physical environment helps children focus on what is relevant to their learning and enhances their opportunities to develop cognitive, social, and language skills. A major study of child care centers reveals that the availability and organization of equipment and materials is one of the most reliable predictors of a program's overall quality. As materials are less available and more disorganized, teachers increase their efforts to exert control and, therefore, are less friendly and sensitive. Among children, conflicts arise more frequently in disorganized learning environments, prompting teachers to spend more time explaining the classroom's social rules. Children appear disinterested and are less engaged in learning activities when materials are disorganized or difficult to obtain (Kritchevsky & Prescott, 1969).

Spatial arrangements. ECI classrooms employ spatial zoning that supports different groupings of children for various purposes. Open spaces are available for large-group gatherings, such as music and movement activities, planning, or visits from resource people in the community. Spaces for small groups allow approximately 3-5 children to engage in cooperative learning or playing activities, thus

fostering collaboration as a community of learners. Smaller or more enclosed spaces, such as a table for two persons with low dividers on either side, afford more privacy for individual children to engage in solitary play, work independently on a project, or engage in one-on-one interactions with teachers or specialists. These more secluded areas of the classroom also support the interactions of pairs or peer tutoring.

Spatial arrangements based on open space models have been widely accepted for children of kindergarten age and younger. Except for during the open education movement of the 1970s (Morrison, 1998; Wortham, 1994), classrooms that serve the primary grades typically have used more traditional arrangements, with children sitting in individual desks or at long rows of tables. Unfortunately, these traditional arrangements do not lend support to the differentiated forms of instruction and active learning that are the hallmarks of the ECI Model. For preschools, Caples (1996) recommends defining distinct activity areas, or "shells," that teachers can design to accommodate developmentally appropriate activities, equipment, and materials. These spatial zones can be personalized to reflect children's individual preferences (Caples, 1996). To accommodate children who require adaptive equipment, teachers and specialists take into consideration the size and kind of adaptive equipment needed to ensure each child's full participation. Ample space is allowed for children to move freely.

Zoning also helps to create a well-organized spatial arrangement for outdoor playgrounds. Children's dramatic play activities are facilitated when playground structures and equipment are grouped to integrate different kinds of play activities. Defining zones with boundaries and linking zones with wheelchair-navigable paths create an inclusive outdoor playground that supports rich play involvement, invites movement, and provides convenient mobility for all children (Frost, 1992). Under the provisions of the Americans With Disabilities Act (ADA), all children should have access to the same play opportunities (Winter et al., 1994). Consequently, care must be taken to integrate specialized or adaptive equipment into play zones.

Predictable basic arrangements. It is a common belief in early childhood that learning environment space must be flexible, and then be changed as children grow and develop or become involved in new projects or explorations (Mayesky, 1995; Taylor, 1993). Frequent changes, however, may be disadvantageous. Children gain independence, learn self-help skills, and develop self-control when materials are predictably organized (Mayesky, 1995). Teachers in ECI programs recognize that the predictability of the physical environment can affect the safety of some children and the development of independence in learning for others. A stable arrangement of physical space can help children, especially those with disabilities, remain safe while they engage in play and learning activities offered by indoor and outdoor environments (Frost, 1992).

Organizing environments to offer some degree of stability and predictability helps children achieve an orientation toward those environments. Outdoor environments with pathways and indoor classrooms with clearly defined traffic paths help children navigate these areas safely. Encouraging children to keep loose toys and materials in designated areas is another important aspect of creating a stable, predictable environment, especially when children with visual impairments or motor difficulties are in-

cluded. Reliability also can help children who are deaf, hard of hearing, blind, or visually impaired to function as independently as possible (Frost, 1992; Oseroff et al., 1987). Therefore, teachers in ECI settings should consider the abilities and needs of individual children when determining the degree of predictability in physical arrangements. In some cases, it may be more prudent to meet the changing needs of children by rotating materials and equipment, while keeping the basic layout intact.

Learning centers. Learning centers, often called activity or interest centers for the youngest children, can help teachers achieve the goals of inclusion by enriching the environment with a variety of concrete objects, toys, and materials that stimulate a child's creativity and active learning. Learning centers emerged during the open education movement of the 1970s as an arrangement that allowed for the individualization of learning (Wortham, 1994). Despite the "back to basics" movement of the 1980s that returned many elementary schools to traditional classroom arrangements, grouping materials into centers has remained a familiar arrangement in preschools and kindergartens. Today, there are good reasons for extending the use of learning center arrangements through the primary grades and beyond.

When properly implemented, learning center arrangements create a powerful context for active learning by diverse groups of children. Learning centers support differentiated instruction for children who are gifted and talented (Davis & Rimm, 1994; Maker, Nielson, & Rogers, 1994), disabled (Safford, 1989), or have reading and literacy problems (Eanes, 1997). Freiberg and Driscoll (1996) recommend using learning centers in elementary through secondary classrooms for interactive practice, review, and individualization. Learning centers offer children choices, provide both independent and cooperative learning opportunities, allow for self-pacing, and can present multiple levels of challenge. While children are engaged in learning center activities, teachers can tutor individuals, interact with small groups, or observe children's activities for assessment purposes (Freiberg & Driscoll, 1996). In ECI settings, these benefits are more critical as the diversity of children increases and their range of abilities widens. The flexibility of learning center approaches supports the need for differentiated teaching.

Empirical evidence suggests that it is vital to provide materials that are both age-appropriate and matched to children's developmental level. Arranging these tasks and materials into clearly identifiable centers can promote meaningful engagement of young children with disabilities during free play and facilitate their social interactions with their nondisabled peers (Bailey, Harms, & Clifford, 1983; Brinker & Thorpe, 1986; Pollowy, 1974).

Learning centers also are a useful spatial arrangement for children who are linguistically and culturally diverse. A full range of teaching and learning techniques, from direct instruction to inquiry and exploratory learning, is supported by learning center arrangements. Children's language and cultural learning is enhanced when they are given freedom of movement and allowed to choose from a variety of activities and materials that are presented in culturally relevant contexts. Most important for language development, these arrangements provide high-quality opportunities for young children to interact and acquire expressive and receptive language skills

naturalistically (Enright & McCloskey, 1988; Peregoy & Boyle, 1993; Saracho, 1993; Saracho & Spodek, 1983, 1995). At the primary level, teachers can introduce some specific tasks into the learning centers that encourage children to begin using academic language related to higher-order cognitive processing. Through these experiences, children are able to experiment with language as they socially construct meaning, as Vygotsky theorized (Peregoy & Boyle, 1993; Perez, 1996).

A multilevel range of activities and materials. Learning centers are ideal for creating relevant contexts for children's explorations. While children can work on an activity independently, the opportunities for cooperative endeavors are a valuable benefit of learning center arrangements. Diverse groups of children who vary in ability can work and play together within the same learning center context when teachers carefully select materials and activities. When children are linguistically and culturally diverse, it is important that center activities offer challenges at different levels of language acquisition and literacy development (Enright & McCloskey, 1988). For all children, it is important to plan age-appropriate activities and to assemble materials that represent a full range of challenges, from simple to complex. Children with developmental delays can begin with tasks that are less challenging and advance to more complex activities as they gain skills. Conversely, children with high ability or giftedness require activities and materials that enable them to explore in greater depth, or to accept more complex challenges that are appropriate for their skills and development (Kitano, 1989; Meador, 1996). Learning center arrangements equipped with a range of tasks allow children with varying abilities to work at their own levels without isolation, preserving their opportunities for social interaction with peers (Winter, 1997).

Computers can be integrated into centers to provide multilevel challenges. Enright and McCloskey (1988) suggest that second language learners can benefit from this strategy when teachers carefully select software packages. Today's software often provides convenient ways to offer multilevel tasks and to monitor the results of children's work. Many computer software applications for children can be set at various levels of difficulty and can keep track of children's progress.

When the materials and activities foster the growth and learning of children operating at different developmental levels, the stage is set for possible cooperative efforts. Also, young children with delays or disabilities are able to engage in peer imitation or peer tutoring with children who have typical abilities and developmental patterns (Guralnick, 1978, 1980). While having children with different ability levels in proximity can yield benefits, Guralnick (1978, 1980) warns that there is no guarantee of this occurring. Therefore, it is vital that teachers in ECI settings encourage such collaborative explorations and social interactions within the relevant contexts of learning centers.

Encouraging equitable use of learning areas and materials. Equity is encouraged when teachers take steps to ensure that girls and boys are attracted to different areas of the room and learning centers in roughly equal proportions. Sometimes, children of one gender are attracted to a learning center or area in disproportionate numbers. It is important for teachers to analyze these situations to determine possible reasons for the imbalance, and to take steps toward achieving greater equity

(Sadker, Sadker, & Long, 1997). Au (1993) reports that one effective strategy is changing the materials or the location of a learning center until more equitable usage is observed. Combining two learning centers is another environmental modification strategy that may, in certain cases, facilitate mixed-sex groups. In one study of young children's social behavior, investigators observed more solitary play occurring in a housekeeping center. Conversely, social play was more prevalent in an area with blocks. When the two centers were combined, observers noted an increase in social, mixed-sex play (Kinsman & Berk, 1979). However, when another study added both housekeeping play props and constructive equipment (blocks and crates) to an outdoor playground, cross-gender play did not increase significantly. The blocks and crates did appear to be a common interest of both boys and girls (Hartle, 1996).

Nurturing creative expression. Placing open-ended materials that have no "right" or "wrong" uses in learning centers can spark children's creativity. Blocks, cardboard boxes, recycled junk, and play dough are multipurpose items that can result in a variety of outcomes. Equally important, such open-ended materials support a child's engagement in exploratory and creative processes that have no particular outcome or product. Natural materials, such as sand and water, are open-ended materials that are favorites of toddlers and can stimulate creativity in both indoor and outdoor learning environments (Winter, 1985). The flexibility afforded by these materials allows children an infinite range of options to support their play and creative expression. Versatile, loose parts, such as sand toys, plastic crates, and dramatic play props, also encourage children's creativity (Frost, 1992; Mayesky, 1995; Schirrmacher, 1998). By observing play with open-ended materials in ECI settings, teachers can identify young children who already show evidence of highly creative thinking. All children have the potential for becoming more creative thinkers and problem solvers. Therefore, providing children with versatile materials and facilitating their creative interactions with those materials offer children opportunities for developing divergent thinking skills. Nurturing children's creative expression across the curriculum is an important step toward increasing the competence of all children (Baer, 1993/94; Schirrmacher, 1998).

Encouraging independence with availability and access. Readily available materials and equipment afford children opportunities to gain independence in learning. Teachers may need to organize equipment and materials so that they are easily accessible to children with disabilities. Ideally, accessibility for children with disabilities should be integrated into the play and learning environments in virtually imperceptible ways. Ramps that are at least 4 feet wide and have a gentle incline can be built into playscape structures, allowing wheelchair access to certain play areas. Nondisabled children may use the ramps for access, as well. Similarly, slides can be embedded in grassy mounds or ramps can provide access, eliminating the need for stairs or ladders. Linking all playground areas with a firm, level path of material that can be traversed by a wheelchair is vital to accessibility. This feature also makes the playground safer for all children, and especially those with visual or hearing impairments. The path becomes a haven away from moving equipment and running children, increasing the safety of moving from one area of the playground to another for

children who may not be able to see potentially dangerous situations or hear warnings (Frost, 1992).

Careful planning is needed to ensure that children with and without disabilities find materials equally accessible. Placing indoor toys and materials at two heights—table and floor levels—creates accessibility for most children. Some children with impaired mobility, such as those who use walkers or wheelchairs, can more easily acquire the materials they need to support their play and learning activities when these items are positioned at table heights. While this option suits many children, teachers of young children know that the floor is a favorite play area for many children. Although some children with physical challenges are able to play on the floor with their peers, while there they may be unable to gain access to materials placed at the table height. Consequently, floor-level placement of some materials gives these children access and encourages their participation in activities with their nondisabled peers (Winter et al., 1994).

An ECI learning environment fosters independence in learning through the use of child-size furnishings, environmental cues, and adaptive equipment when accommodation is needed. Cues, such as signs or pictures indicating where materials are stored, can encourage children to use and replace items on their own. Adaptive equipment, such as scooter boards or communication devices, may be needed by some children to facilitate their independent exploration of the learning environment's physical and social aspects. When equipment and materials are readily available, children have freedom of choice and opportunities to guide their own learning (Bailey et al., 1983).

A learning environment that is organized to promote independent functioning is particularly vital for children with disabilities. Sainato (1990) warns that preschool children with disabilities are frequently at-risk for failure unless the learning environment fosters their independence.

Promote cooperative, interactive experiences. A major goal of ECI programs is to promote a community of learners who cooperatively pursue learning with the facilitation of a responsive teacher. Consequently, ecological arrangements should foster all children's full participation and inclusion in learning activities with their peers. "Inclusion" in this sense means that all children, regardless of ability, should have opportunities to maintain proximity to their peers while engaging in actions and activities that are similar in content and result (Atwater, Carta, Schwartz, & McConnell, 1994). For example, a water/sand table designed to accommodate a wheelchair will allow children with physical challenges to have water and sand play experiences that are similar to their peers'. This provision also affords proximity to peers, providing opportunities for conversations and social interactions.

Create a Selective, Visually Focused Environment

The learning environments of ECI programs are sensory-rich and aesthetically appealing. Only a moderate number of well-chosen items are displayed, however, in order to avoid a cluttered, disorderly visual environment (Marion, 1995). With a moderately stimulating physical environment as a backdrop, teachers can choose

decor or arrangements of materials that will help to focus children's attention on relevant aspects of the learning environment. Conversely, when teachers adhere to excessively liberal interpretations of the terms "enriching" and "print-rich," they may not be in keeping with Piagetian theory. Creekmore (1987) challenges the common practice of decorating classrooms with an assortment of potentially distracting items, such as multiple bulletin boards, alphabet lines, open cubby holes for belongings, artwork, audiovisual equipment, and learning centers. He warns that these over-stimulating environments can present obstacles, especially for children who have learning problems.

Powerful distractions can confuse children and discourage their prolonged engagement with materials and tasks designed to facilitate their learning. According to classic Piagetian theory, children learn to make sense of their physical world through interactions with stimuli a few bits at a time. Consequently, Creekmore suggests eliminating much of the distracting visual stimuli in classrooms. Instead, he believes teachers should focus children's attention on selected visual stimuli related to concepts newly introduced. By increasing the salience of planned visual displays and facilitating children's interactions with those stimuli, children's cognitive learning can be enhanced. Creekmore proposes using a teaching wall approach, in which a teacher designates one wall as an "acquisition wall" to hold materials used to introduce new concepts. For example, if children are involved in a thematic unit exploring plant life, the teacher would arrange photographs, pictures, and print related to plant life on the acquisition wall. An adjacent wall, designated as a "maintenance wall," would offer children a few selected interactive materials that reinforce previously introduced concepts. The maintenance wall activities serve to strengthen children's prior knowledge and to facilitate bridging new concepts. On the third, "dynamic" wall, teachers display children's work and a few routine visuals typically found in classrooms, such as a helper chart, calendar, or class rules chart.

Limited preliminary data collected in lower elementary grades support the efficacy of Creekmore's approach. Eliminating much of the distracting visual stimuli in classrooms and focusing children's attention on selected stimuli may increase the salience of the displayed materials. Using this visual focusing approach appears to result in greater skill acquisition for young children, including those with mild learning impairments (Creekmore, 1987).

Focus children's visual attention. Creekmore's principles can be applied in two ways to improve the visual impact of ECI settings. First, using the multidimensional approach previously described in this chapter, teachers can evaluate the overall visual impact of the classroom. Identifying which stimuli are likely to attract children's attention, and evaluating the significance of those stimuli toward children's learning, is critical. Observations of children in the classroom can help verify the teacher's hypotheses about which stimuli attract children's visual attention. For example, if a mobile hanging from the ceiling attracts considerable attention but is relatively unimportant to learning, the teacher may choose to move it to a different location, or even remove it entirely. Next, teachers can evaluate the visual impact of each organized area or learning center. Overstimulation in any of these

areas could interfere with children's prolonged engagement, and could contribute to an overstimulating visual environment as a whole.

Another focusing strategy has been tried to aid the visual engagement of children. Investigators have experimented with adjusting the patterns of brightness in a room to create areas of emphasis. This strategy, called "spotlighting," involves increasing the brightness of lighting focused on particular visual stimuli. Elementary-age children and children who are deaf have demonstrated increased visual attention to instructional classroom materials that were deliberately enhanced by spotlighting (Herron & LaGiusa, 1975; LaGiusa & Perney, 1973, 1974).

Create a print-focused environment. The old adage "more is not necessarily better" seems to apply to the visual aspects of the learning environment. More benefits appear to be gained by selectively decreasing the visual complexity of the environment. For example, instead of thinking of "print-rich" as a goal for the visual aspects of literacy environments, teachers can aim for a "print-focused" visual environment. Many teachers provide a barrage of printed words that cover the entire wall space of the classroom and remain displayed for months. This approach risks overstimulation and could hinder children's learning. When the goal is a "print-focused" visual environment, however, teachers use print selectively in relevant contexts to focus children's attention on the meaning of the print. In other words, labeling everything in the room is less effective than targeting particular areas or displays for enrichment with printed messages. A print-focused room incorporates a relevant use of print that can be replaced regularly as the novelty begins to fade. Dudley-Marling (1993) says children are encouraged to read classroom print when it is replaced frequently. Computer technology is a valuable tool in generating printed words, messages, and excerpts from children's literature to display in meaningful contexts. Using Printshop Deluxe and similar software, children can help prepare banners or posters with enlarged text and graphics related to their interests or unit themes. In addition to increasing the relevance of the print displayed, these materials also contribute to personalization of the learning environment.

> ***What is a sentence?***
>
> *Second-graders in Mr. Loft's room were learning to differentiate between a complete sentence and a fragment. Mr. Loft used one wall of his classroom to give children extra information and practice in learning this concept. He placed a poster on this wall that gave the rule for determining a sentence. He placed examples of complete sentences and fragmented sentences on the display. Children could add their own complete sentences to a wipe-off board in one corner.*

Use of color. The use of color in early learning environments has been approached from many different standpoints. One architect specializing in school facilities says that a variety of vibrant colors should be used, including yellow because it is the first color that infants can perceive (Caples, 1996). Others agree that the basic principles of color and their purported psychological effects should govern how color is used in early childhood environments (Graves, Gargiulo, & Sluder, 1996;

Taylor, 1993). For example, "cool" colors (e.g., blue) are thought to exert a calming effect, and "warm" hues (e.g., red) are more stimulating. Gifford (1997) cites clinical evidence, however, that casts serious doubts on the validity of such psychological effects. He suggests that associations we form between colors and environmental objects, such as red with fires and blue with cool water, may trick us into believing that color affects our mood.

From a scientific perspective, we know relatively little about how colors used in classroom decor affect the behavior and learning of young children. Taylor (1993) asserts that "color has a decisive influence on children's academic performance" (p. 145). Unfortunately, precious little research is available to support this assertion. Few empirical investigations have examined the relationship of color to learning, and, of these, several have lacked adequate controls to provide conclusive findings. For instance, Taylor cites as evidence Ertel's study (1973), which claimed that children's IQ scores in brightly colored rooms were higher than those of children in drab rooms. Gifford (1997) warns, however, that flaws in the experimental design of Ertel's study preclude a definitive conclusion.

Gifford reports that studies using careful controls have found colors to have little effect on children's achievement. Despite the popular notion of red being an arousing color, several studies found that the predominant use of red in the decor did not boost children's performance on math, reading, or motor tasks. Neither did blue and yellow rooms significantly affect children's performance. Consequently, teachers in ECI classrooms are not too quick to make radical changes to the color scheme of their learning environments. Well-designed research should be sought to help teachers gain a fuller understanding of the use of color in the decor.

Rather than identifying particular colors for an overall color scheme, it could be more important to use color selectively to attract attention. Rather than distracting children with a rainbow of colors scattered throughout the room, selective use of color could help attract and focus children's attention. Maria Montessori recognized the power of color as a visual cue, using neutral colors, such as white, cream, or gray, as backgrounds so that colorful teaching materials would be more visible. Children's cultural heritages could guide color choices. Caples (1996) suggests using ethnic color palettes to create a sense of pride, and to connect school and home life.

Plan an Effective Listening and Communication Environment

The importance of spending time and effort toward planning an effective listening and communication environment for young children in ECI settings cannot be overemphasized. Listening is a primary component of communication among children, their peers, and teachers, and it is fundamental to children's development of literacy and academic skills. Language acquisition, reading, and writing all depend on the processes of listening and communication. When the learning environment is acoustically sound, engagement or on-task behavior is promoted (Berg, 1993).

When children have a poor listening environment, disruptions or delays of language, social, and cognitive development can occur. Young children who are acquiring foundational skills in language, literacy, and academics are likely to suffer the

greatest harm from listening environments that inadequately support communication. Children with certain characteristics may be especially at risk in poor acoustical environments. The communication environment offered to children who are deaf or hard of hearing is of serious concern. An effective listening and communication environment for these children may include the use of amplification devices or alternative modes of communication, such as sign language, to compensate for their hearing loss. Difficulty in listening may result in a child's reliance on lip-reading, a strategy that has its disadvantages. In ordinary circumstances, there are fewer perceptible visual speech cues than auditory speech cues for children to use in understanding what is being said. In addition, the speaker must be facing the child for lip-reading to be at all effective (Berg, 1993).

Other special groups of children also benefit from careful attention to the listening and communication environment. Environments that are conducive to listening and communicating can be critical as teachers help children cope with learning problems, such as poor memory, slow information processing, and distractibility. A poor listening environment can hinder the progress of second language learners in acquiring proficiency in the communication skills that are critical to their academic success.

Effects of noise. Noise can have both immediate and cumulative effects that interfere with children's opportunities to listen and communicate. Noisy conditions may cause children to be less attentive to auditory cues and information. As a result, children may miss information or instructions from teachers, compounding their errors and learning problems. Particularly damaging to young children who are learning how to learn, noise can interfere with development of strategies for learning and problem solving. Continued loud noise also can result in adverse consequences for the academic skills, health, and language and social development of young children. Children tend to perform learning tasks less efficiently and may give up on tasks more easily when noise is a factor. Their blood pressure rises, and they do not appear to adapt to long-term noise conditions. Moreover, the effects of noise may persist after the noise, itself, has abated (Cohen, Krantz, Evans, Stokols, & Kelly, 1981; Cohen & Weinstein, 1982; Weinstein & Weinstein, 1979).

Individual children appear to respond differently to noise. Studying highly motivated students in open space classrooms, Weinstein and Weinstein (1979) found that these children seemed to ignore the background noise very well. The investigators warn, however, that this finding may not hold true if noise levels are more extreme or if learners are less motivated. Gender differences in children's responses to noisy conditions also have been reported. Findings indicate that girls perform better in quieter learning environments, compared to boys, whose optimal learning environment is characterized as "relatively noisy" (Christie & Glickman, 1980).

Solutions and remedies. Berg (1993) alleges that elementary schools are frequently "acoustically hostile," interfering with children's opportunities to listen and learn. Such acoustical problems are not always easy to remedy. Some noise problems, such as aircraft, traffic, machinery, or train noise, require community involvement to solve (Cohen et al., 1981). Aging school buildings can be extra challenging. Schools built between 1915 and 1940 typically possess poor acoustical characteris-

tics, such as high ceilings and hard surfaces that reflect sound (Silverstone, 1982). Open space schools erected in the 1960s and 1970s also present challenges. These schools were designed with few interior walls to accommodate multiple classroom groups in large, open areas (Weinstein, 1979). As the era of open space school design waned, many of these schools installed permanent walls or used moveable dividers to cordon off space as they reverted back to single classroom arrangements. Depending on the materials used to construct these barriers, some classrooms today are affected by noise from adjoining classroom areas.

Merely adding acoustical absorption materials, such as carpeting or acoustical ceiling tiles, is not always the answer to acoustical problems. In fact, indiscriminate use of acoustical materials can actually contribute to poor acoustical quality. The common use of acoustical ceiling tiles in school settings, in particular, is of questionable value. It may be more effective and economical to improve the acoustical quality of a room with carpeting (Berg, 1993; Jorde, 1982). Sometimes, the situation warrants analysis by acoustical experts. Be aware, however, that not all architects, audio engineers, or sound contractors have an understanding of schools' unique acoustical problems (Berg, 1993).

Teachers and administrators *can* provide an effective listening and communication environment in the following ways:

- Teachers can increase children's environmental competence by helping them become aware of the noise level and its relationship to their well-being during work, rest, and play activities.
- Technological tools, such as tape recorders and sound level meters (available at electronics retailers for under $50), can help teachers and children evaluate noise levels and sound quality (Berg, 1993; Gifford, 1997).
- Signals or cues, such as dimming the lights, are ways to remind children to modify their voices and activities in order to reduce the noise levels (Fletcher, 1983).
- Teachers can model noise control strategies by communicating with children face-to-face, rather than shouting across the room or playground.
- Clearly delineated traffic pathways enable teachers and children to reach each other quickly, possibly reducing the temptation to raise voices (Berg, 1993; Mayesky, 1995; Taylor, 1993).
- Modeling careful use of vocal communication also helps teachers avoid abuse of their vocal chords. When the quality of teachers' voices is preserved, their communications are more understandable.
- Administrators should monitor the ratios of children to teachers, to guard against the overcrowding of indoor learning environments (Berg, 1993).
- It is critical to design a floor plan that separates noisy activities from those that require a quieter environment, by using low shelves or less noisy activity areas as buffers (Taylor, 1993).

Collaborative planning with a team that includes school administrators, teachers, specialists, and families can be effective when striving to improve listening and

communication environments. Members of the team can help identify sources of intrusive noise and evaluate the acoustical qualities of indoor areas and outdoor playgrounds. When acoustical problems are detected, the team can work cooperatively to find acceptable solutions, using school and community resources, to eliminate these distractions. The following case incorporates a number of solutions based on Berg's (1993) research:

Toscano Elementary

Toscano Elementary is an inner-city school that serves children from 3 years old to the 5th grade. The main school building is over 75 years old; portable buildings were added recently to meet the demand for additional classroom space. Undue noise was a recurring problem. Noise from traffic was a problem in outdoor playground areas, and a parking lot along one side of the building allowed cars to park within inches of the classroom windows. The hard floors and walls of the main building's classrooms caused sounds to reverberate. In the newer portable buildings, accordion-style doors separating classrooms allowed sounds to penetrate, and loud noise produced by individual heating and air conditioning units exacerbated the poor acoustical conditions.

As the school's population reflected greater diversity and younger children were served, the teachers began implementing more inclusive approaches throughout the school. As learning center arrangements, play-based strategies, and cooperative learning increased, so did the noise levels. The school principal, teachers, and parents began to realize that the acoustical problems must be addressed. The campus planning team recommended hiring an acoustical expert. With the authority's help, a comprehensive noise control plan was devised.

Teachers attended inservice training to improve their organizational and guidance techniques in open-space learning center arrangements. The old school building's exterior structure was repaired to block outside noises. A chain was placed across the parking lot entrances to keep cars from using it during school hours. For acoustical absorption, carpeting was added to some classrooms and the accordian doors were replaced with permanent, insulated walls. Quieter heating and cooling units were installed. The principal reduced class sizes, particularly in preschool through primary. To reduce traffic noise, a hedge was planted just inside the fence that surrounded the playground. Families and the community were involved throughout the process, procuring raw materials and donating their labor.

Design Unique, Personalized Environments

Educational environmental psychologists stress that there is no single ideal design for physical classroom settings. Teachers must consider the program goals, the curriculum, and the characteristics of children in the learning environment (Weinstein, 1981). Therefore, the aim of ECI programs is to sculpt unique learning environments that fit the membership of the group. One way to accomplish this goal is to personalize the learning environment for each child. The room can be decorated to reflect

the originality, cultural heritage, and unique characteristics of children and their families. This is a very natural way to introduce children to multicultural education.

Promoting acceptance. Personalization helps children feel accepted, and it promotes the development of positive self-esteem. A physical environment that contains some familiar elements can help bridge the gap between home and school (Winter, 1994/95). Teachers can encourage family involvement by inviting families to contribute decorations and artifacts that reflect their cultural heritage or traditions (Derman-Sparks & ABC Task Force, 1989).

One way to achieve these goals is to visualize the room through the eyes of individual children (York, 1992). Of course, this strategy implies that the teacher has acquired insight and appreciation for each child as a unique individual. Rather than teaching a group or a class, teachers in ECI settings must be committed to teaching individuals. Knowing what is strong, unique, and positive about each child is a prerequisite for designing an effective physical environment.

Children with disabilities. The Americans With Disabilities Act (ADA) has implications for creating unique environments. According to this mandate, reasonable steps must be taken to provide opportunities and experiences for citizens with disabilities that are analogous to those available to all citizens. Rather than preparing for a full range of disabilities from the outset, ADA allows for compliance as the situation arises. Therefore, to comply with the intent of ADA, ECI programs make reasonable adjustments of the physical environment to accommodate the unique needs of individual children with disabilities who are enrolled in the program. Changes in either enrollment or the abilities of individual children may necessitate certain modifications. The teacher's role is to keep the environment responsive to children's current needs. Designs that offer choice and a wider range of experiences with peers are vital for these children (Winter et al., 1994).

The Individuals With Disabilities Education Act (IDEA) mandates that children with disabilities have the legal right to a free, appropriate education in their least restrictive environment (LRE). Therefore, teachers in early childhood settings that include children with disabilities are obligated to consider the implications of LRE requirements on the design of indoor and outdoor physical environments. As Sainato and Lyon (1989) point out, *how* to accomplish inclusion is far less clear than the reasons *why* we should. How to provide least restrictive environments for children with disabilities in inclusive settings needs much clarification through diligent empirical research.

Create a Literacy-oriented Environment

An important goal of inclusion is to prepare children for living in a technologically advanced world, one that requires strong literacy skills. Salinger (1996) says teachers should use both social and physical aspects of the environment to create a literacy workshop that supports children's natural propensity toward acquisition of language and literacy. Through social interaction, the teacher tries to engage children in literacy events that are prompted by the physical elements in the environment. For example, teachers can draw children's attention toward print that is displayed, encourage use of books, or provide opportunities for children to use

writing materials. Physically, the room needs places for displaying print, especially children's work samples. In a literacy workshop environment, furniture and space are arranged to accommodate both shared and private literacy events. Also, storage is available for literacy materials and children's printed materials.

Display children's work. Commercially prepared or teacher-prepared charts and posters may have less impact on children than their own artwork and printed materials. Weed (1991) believes children attach more relevance to work resulting from their own direct involvement in literacy processes. A pre-kindergarten teacher noticed the salience of child-made materials in her class. She taught in a low-income area, in a school that served children who were culturally and linguistically diverse. During a language experience activity, the teacher made a chart with words for each alphabet letter that the children had dictated to her. Across the room, a similar commercially prepared chart was displayed. The teacher noted the children used their own chart as a reference more frequently than the commercial one.

Use multilingual environmental print. The literate environment for children who are linguistically diverse includes environmental print in the children's first and second languages. Providing multiple translations on the same printed material, however, may yield a disadvantage that is reportedly associated with concurrent oral translation. That is, children may attend to their primary language and ignore the incomprehensible input of the second language (Crawford, 1991). On the other hand, labeling certain displays or areas in a child's first language and others in the second language may facilitate bilingualism and enable teachers to assess children's progress toward this goal. It has been reported that children who speak little or no English *do* learn to read environmental print in English (Goodman, Goodman, & Flores, 1979). Consequently, teachers can gain valuable information about children's literacy development in their second language by observing their awareness of and response to print in the second language (Crowell, 1991). Purposefully using bilingual or multilingual print makes the early childhood environment more meaningful to children who are linguistically diverse, and it may help them bridge comprehension from their first language to their second language.

Provide a library corner. Research points to the significance of having a well-developed library corner in each classroom, even when schools have a shared central library (Morrow, 1982). Increasing children's access to literature appears to increase the amount of time children engage in reading activities (Morrow & Weinstein, 1982). In a survey of over 130 nursery school through 2nd-grade classrooms, the investigator found that less than one quarter of these classrooms partitioned an area of the room for a library. Nursery school and kindergarten classrooms were more likely than the 1st- and 2nd-grade classrooms to provide comfortable seating where books were displayed. Few library areas had displays, felt boards, or other materials to encourage children's participation in literacy activities (Morrow, 1982).

For early childhood programs, Veatch (1968) recommends a permanent classroom library of about 100 books. Teachers can temporarily add other books throughout the year to correspond with seasonal themes or units of study (Veatch, 1968). Materials available in inclusive environments should reflect a pro-diversity perspective

whenever possible. Wise selections of children's literature can promote sensitivity and understanding in inclusive classrooms. Through literature, teachers can instill the idea of focusing on people's strengths. Portrayals of persons who have drawn upon their own abilities to create success can offer children vicarious role models. Salinger (1996) suggests collections of literature with multicultural and multiethnic characters and themes. Literature should help children respect the uniqueness of cultural groups in both historical and contemporary contexts. Books should portray characters and lifestyles accurately, and provide factual information. Stereotypical portrayals of characters are not acceptable. Books that include positive depictions of ethnic minorities, women, and the disabled in major roles can promote the valuing of diversity (Salinger, 1996). For young boys, providing books with male role models helps counteract the mistaken notion that reading is an activity more suitable for girls (Grossman & Grossman, 1994). Finding children's literature featuring males will, no doubt, be an easier task than providing young girls with literature-based female role models. While the numbers of female main characters has increased since the 1970s, male characters still outnumber those of females in children's literature (Sadker & Sadker, 1994).

Design a Child-centered Learning Environment

Two steps can lead to a more child-centered learning environment in ECI settings. First, teachers can involve the children in designing the learning environment or in planning changes as needs arise. Even very young children can offer valuable insights and learn environmental competence skills in the process. Children as young as 4 have proven capable of learning basic concepts of classroom design (Sommer, 1972). With training, 8-year-olds were able to design classrooms and other settings in ways that reflected good architectural quality (van Wagenberg, Krasner, & Krasner, 1981). Children can learn about classroom dynamics, such as "traffic flow" and "noise level," and assume some responsibility for maintaining an orderly early childhood environment (Salinger, 1996).

The second step is for teachers to engage in ongoing evaluation of synomorphy in the learning environment. "Synomorphy" is a term that environmental psychologists use to describe the principle of ensuring a synchronization, or "goodness of fit," between the physical and social aspects of the learning environment (Gifford, 1997). Teachers in ECI settings can gauge this fit through careful observation of the children's use of the environment. For example, teachers can evaluate whether some areas of the room seem to limit or restrict children's movements during play. If the cooperative interactions of children seem inhibited, teachers can determine if changes are needed by observing how the children use classroom spaces and the kinds of materials they use.

Integrate Technology Into the Environment

The placement of technological equipment is an important factor in the design of inclusive education environments. To promote the use of technology, it is helpful to locate equipment, such as computers, in areas of the room that are convenient and

accessible for teachers and all the children. Space must be adequate so that 2-3 children and the teacher can interact comfortably with the computer. Placing computers in an isolated area of the room can result in crowding of children and management problems. Consequently, teachers report that dispersing computers to sites throughout the room eliminates crowding and allows technology to be integrated into different learning tasks (Prickett, Higgins, & Boone, 1994). Placing computers on movable carts can be a convenient approach. For example, one day a computer may be used in the library center to introduce interactive storybooks. The next day it could be placed in a theme center on nature's monsters, where children could use it to consult an age-appropriate encyclopedia on CD-ROM.

CONCLUSION

In ECI programs, learning environments are carefully planned using available empirical evidence. The learning environment is considered to be a complex ecology that should support the growth, development, and learning of young children. A multidisciplinary team approach to designing such learning environments is best when promoting the inclusion of all children. The key goal is to create a geographical match between the learning environment and individual children.

REFERENCES

Altman, I., & Wohlwill, J. F. (1978). *Children and the environment.* New York: Plenum.

American Public Health Association & American Academy of Pediatrics. (1992). *Caring for our children. National health and safety performance standards: Guidelines for out-of-home-child care programs.* Elk Grove Village, IL: Author.

Atwater, J. B., Carta, J. J., Schwartz, I. S., & McConnell, S. R. (1994). Blending developmentally appropriate practice and early childhood special education: Redefining best practice to meet the needs of all children. In B. L. Mallory & R. S. New (Eds.), *Diversity and developmentally appropriate practices: Challenges for early childhood education* (pp. 185-201). New York: Teachers College Press.

Au, K. (1993). *Literacy instruction in multicultural settings.* Forth Worth, TX: Harcourt Brace College Publishers.

Baer, J. (1993/94). Why you shouldn't trust creativity tests. *Educational Leadership, 51*(4), 80-83.

Bailey, D. B., Harms, T., & Clifford, R. M. (1983). Matching changes in preschool environments to desired changes in child behavior. *Journal of the Division of Early Childhood, 7*, 61-68.

Bailey, D. B., & McWilliams, R. A. (1990). Normalizing early intervention. *Topics in Early Childhood Special Education, 10*(2), 33-47.

Berg, F. S. (1993). *Acoustics and sound systems in schools.* San Diego, CA: Singular Publications Group.

Boyer, E. L. (1991). *Ready to learn: A mandate for the nation.* Princeton, NJ: The Carnegie Foundation for the Advancement of Teaching.

Bredekamp, S. (Ed.). (1987). *Developmentally appropriate practice in early childhood programs serving children from birth through age 8.* Washington, DC: National Association for the Education of Young Children.

Brinker, R. P., & Thorpe, M. E. (1986). Features of integrated educational ecologies that predict social behavior among severely mentally retarded and nonretarded students. *American Journal of Mental Deficiency, 41*, 150-159.

Bruder, M. B. (1993). The provision of early intervention and early childhood special education within community early childhood programs: Characteristics of effective service delivery. *Topics in Early Childhood Special Education, 13*(1), 19-37.

Bruya, L. D., & Langendorfer, S. J. (1988). *Where our children play: Elementary school playground equipment.* Reston, VA: American Alliance for Health, Physical Education, Recreation and Dance.

Caples, S. E. (1996). Some guidelines for preschool design. *Young Children, 51*(4), 14-21.

Carta, J. J., Atwater, J. B., Schwartz, I. S., & Miller, P. A. (1990). Applications of ecobehavioral analysis to the study of transitions across early education settings. *Education and Treatment of Children, 13*(4), 298-315.

Christie, D. J., & Glickman, C. D. (1980). The effects of classroom noise on children: Evidence for sex differences. *Psychology in the Schools, 17*, 405-408.

Cochlear Corporation. (1996). *Static electricity and cochlear implants.* Englewood, CO: Author.

Cohen, S., Krantz, D. S., Evans, G. W., Stokols, D., & Kelly, S. (1981). Aircraft noise and children: Longitudinal and cross-sectional evidence on adaptation to noise and the effectiveness of noise abatement. *Journal of Personality and Social Psychology, 40*(2), 331-345.

Cohen, S., & Weinstein, N. (1982). Nonauditory effects of noise on behavior and health. In G. W. Evans (Ed.), *Environmental stress* (pp. 45-74). Cambridge: Cambridge University Press.

Collins, B. L. (1975). *Windows and people: A literature survey: Psychological reactions to environments with and without windows.* Washington, DC: Institute for Applied Technology.

BEST COPY AVAILABLE

Crawford, J. (1991). *Bilingual education: History, politics, theory, and practice* (2nd ed.). Los Angeles: Bilingual Educational Services.
Creekmore, W. N. (1987). Effective use of classroom walls. *Academic Therapy, 22*(4), 341-348.
Crowell, C. G. (1991). Becoming biliterate in a whole language classroom. In Y. M. Goodman, W. J. Hood, & K. S. Goodman (Eds.), *Organizing for whole language* (pp. 95-111). Portsmouth, NH: Heinemann.
Davis, G. A., & Rimm, S. B. (1994). *Education of the gifted and talented* (3rd ed.). Boston: Allyn and Bacon.
Deiner, P. (1993). *Resources for teaching children with diverse abilities* (2nd ed.). Fort Worth, TX: Harcourt Brace College Publishers.
Derman-Sparks, L., & ABC Task Force. (1989). *Anti-bias curriculum: Tools for empowering young children.* Washington, DC: National Association for the Education of Young Children.
Desouza, E. R., & Sivewright, D. (1993). An ecological approach to evaluating a special education program. *Adolescence, 28*(111), 517-525.
Dudley-Marling, C. (1993). Challenging the children: A holistic approach to teaching students with learning problems. In A. Bauer & E. Lynch (Eds.), *Children who challenge the system* (pp. 89-115). Norwood, NJ: Ablex.
Dunn, R., Krimsky, J. S., Murray, J. B., & Quinn, P. J. (1985). Light up their lives: A review of research on the effects of lighting on children's achievement and behavior. *Reading Teacher, 38*, 863-869.
Eanes, R. (1997). *Content area literacy: Teaching for today and tomorrow.* Albany, NY: Delmar.
Eichinger, J., & Woltman, S. (1993). Integration strategies for learners with severe multiple disabilities. *Teaching Exceptional Children, 26*(1), 18-21.
Enright, D. S., & McCloskey, M. L. (1988). *Integrating English: Developing English language and literacy in the multilingual classroom.* Reading, MA: Addison-Wesley.
Ertel, H. (1973). Blue is beautiful. *Time, September 17*, 66.
Fagot, B. I. (1977). Variations in density: Effects on task and social behaviors of preschool children. *Developmental Psychology, 13*(2), 166-167.
Feitler, F. C., Weiner, W., & Blumberg, A. (1970). *The relationship between interpersonal relations orientations and preferred classroom physical settings.* Paper presented at the American Research Association, Minneapolis.
File, N., & Kontos, S. (1993). The relationship of program quality to children's play in integrated early intervention settings. *Topics in Early Childhood Special Education, 13*(1), 1-18.
Finn-Stevenson, M., & Stevenson, J. J. (1990). Safe care/safe play: Child care as a site for injury prevention. *Children Today, 19*(2), 16-32.
Fletcher, D. (1983). Effects of classroom lighting on the behavior of exceptional children. *Exceptional Children Quarterly, 4*(2), 75-89.
Freiberg, H. J., & Driscoll, A. (1996). *Universal teaching strategies* (2nd ed.). Boston, MA: Allyn and Bacon.
Frost, J. L. (1992). *Play and playscapes.* Albany, NY: Delmar.
Frost, J. L., & Sweeney, T. B. (1996). Cause and prevention of playground injuries and litigation: Case studies. Olney, MD: Association for Childhood Education International.
Gifford, R. (1997). *Environmental psychology: Principles and practice* (2nd ed.). Boston: Allyn and Bacon.
Goodman, D., & Curry, T. K. (1991). Teaching in the real world. In Y. M. Goodman, W. J. Hood, & K. S. Goodman (Eds.), *Organizing for whole language* (pp. 137-169). Portsmouth, NH: Heinemann Educational Books.
Goodman, K., Goodman, Y., & Flores, B. (1979). *Reading in the bilingual classroom: Literacy and biliteracy.* Rosslyn, VA: National Clearinghouse for Bilingual Education.
Graves, S. B., Gargiulo, R. M., & Sluder, L. C. (1996). *Young children: An introduction to early childhood education.* Minneapolis/St. Paul, MN: West Publishing Co.
Grossman, H., & Grossman, S. H. (1994). *Gender issues in education.* Boston: Allyn and Bacon.
Guralnick, M. J. (1978). *Early intervention and the integration of handicapped and nonhandicapped children.* Baltimore: University Park Press.
Guralnick, M. J. (1980). Social interactions among preschool children. *Exceptional Children, 46*, 248-253.
Hartle, L. (1996). Effects of additional materials on preschool children's outdoor play behaviors. *Journal of Research in Childhood Education, 11*(1), 68-81.
Hayes, M. L. (1986). Resource room: Space and concepts. *Academic Therapy, 21*(4), 453-464.
Herron, P., & LaGiusa, F. F. (1975). Brightness variations affect deaf learners' attention. *Lighting Design and Application, 5*, 30-37.
Jones, E. J. (1977). *Dimensions of teaching-learning environments: Handbook for teachers.* Pasadena, CA: Pacific Oaks College.
Jorde, P. (1982). *Avoiding burnout: Strategies for managing time, space, and people in early childhood education.* Washington, DC: Acropolis Books.
Katz, L. G., & Chard, S. C. (1989). *Engaging children's minds: The project approach.* Norwood, NJ: Ablex.
Kinsman, C. A., & Berk, L. E. (1979). Joining the block and housekeeping areas: Changes in play and social behavior. *Young Children, 39*, 66-75.
Kitano, M. K. (1989). The K-3 teacher's role in recognizing and supporting young gifted children. *Young Children, 44*(3), 57-63.
Kostelnik, M. J., Stein, L. C., Whiren, A. P., & Soderman, A. K. (1993). *Guiding children's social development* (2nd ed.). Albany, NY: Delmar.
Kritchevsky, S., & Prescott, E. (1969). *Planning environments for young children: Physical space.* Washington, DC: National Association for the Education of Young Children.
Kuller, R., & Lindsten, C. (1992). Health and behavior of children in classrooms with and without windows. *Journal of Environmental Psychology, 12*, 305-317.
LaGiusa, F. F., & Perney, L. R. (1973). Brightness patterns influence attention spans. *Lighting Design and Application, 3*, 26-30.

BEST COPY AVAILABLE

LaGiusa, F. F., & Perney, L. R. (1974). Further studies on the effects of brightness variations on attention span in a learning environment. *Journal of Illuminating Engineering Society, 4*, 249-252.
Lucas, D., & Thomas, G. (1990). The "geography" of classroom learning. *British Journal of Special Education, 17*(1), 31-34.
Maker, C., Nielson, A., & Rogers, J. (1994). Giftedness, diversity, and problem-solving. *Teaching Exceptional Children, 27*(1), 4-18.
Marion, M. (1995). *Guidance of young children* (4th ed.). Columbus, OH: Merrill.
Mayesky, M. (1995). *Creative activities for young children* (5th ed.). New York: Delmar.
Mayron, L. W., Ott, J. N., & Amontree, E. J. (1975). Light, radiation, and dental caries. *Academic Therapy, 10*(4), 441-448.
Meador, K. (1996). Meeting the needs of young gifted students. *Childhood Education, 73*, 6-9.
Miller, R. (1996). *The developmentally appropriate inclusive classroom in early education.* Albany, NY: Delmar.
Morrison, G. S. (1998). *Early childhood education today* (7th ed.). Upper Saddle River, NJ: Merrill.
Morrow, L. M. (1982). Relationships between literature programs, library corner designs, and children's use of literature. *Journal of Educational Research, 75*(6), 339-344.
Morrow, L. M., & Weinstein, C. S. (1982). Increasing children's use of literature through program and physical design changes. *The Elementary School Journal, 83*(2), 131-137.
National Academy of Early Childhood Programs. (1991). *Guide to accreditation* (Rev. ed.). Washington, DC: National Association for the Education of Young Children.
Neil, S. (1982). Experimental alterations in playroom layouts and their effect on staff and child behavior. *Educational Psychology, 2*, 103-119.
Oseroff, A., Koorland, M. A., & Maratea, K. V. (1987). Resources for the visually impaired. *Academic Therapy, 22*(3), 287-293.
Painter, M. (1976/77). Fluorescent lights and hyperactivity in children: An experiment. *Academic Therapy, 12*(2), 181-184.
Peregoy, S. F., & Boyle, O. F. (1993). *Reading, writing, & learning in ESL: A resource book for K-8 teachers.* New York: Longman.
Perez, B. (1996). Instructional conversations as opportunities for English language acquisition for culturally and linguistically diverse students. *Language Arts, 73*, 173-181.
Piccigallo, P. R. (1989). Renovating urban schools is fundamental to improving them. *Phi Delta Kappan*, 402-406.
Pollowy, A. M. (1974). The child in the physical environment: A design problem. In G. Coates (Ed.), *Alternative learning environments.* Stroudsburg, PA: Dowden, Hutchinson, and Ross.
Pomerleau, A., Bolduc, D., Malcuit, G., & Cossette, L. (1990). Pink or blue: Environmental gender stereotypes in the first two years of life. *Sex Roles, 22*(5-6), 359-368.
Prescott, E. (1984). The physical setting in day care. In J. Greenman & R. Fuqua (Eds.), *Making day care better: Training, evaluation, and the process of change.* New York: Teachers College Press.
Prickett, E. M., Higgins, K., & Boone, R. (1994). Technology for learning . . . not learning about technology. *Teaching Exceptional Children, 26*(4), 56-60.
Raschke, D. B., Dedrick, C., & Hanus, K. (1991). Adaptive playgrounds for all children. *Teaching Exceptional Children, 24*(1), 25-28.
Riding, R. J., & Pugh, J. C. (1987). Dark-interval-threshold, illumination level and children's reading performance. *Journal of Research in Reading, 10*, 21-28.
Rosenfeld, L. B. (1977). Setting the stage for learning. *Theory and Practice, 16*(3), 167-173.
Ross, H. W. (1992). Integrating infants with disabilities? Can "ordinary" caregivers do it? *Young Children, 47*(3), 65-71.
Sadker, M., & Sadker, D. (1994). *Failing at fairness: How America's schools cheat girls.* New York: Charles Scribner's Sons.
Sadker, M., Sadker, D., & Long, L. (1997). Gender and educational equality. In J. A. Banks & C. A. M. Banks (Eds.), *Multicultural education: Issues and perspectives* (3rd ed.). Boston: Allyn and Bacon.
Safford, P. L. (1989). *Integrated teaching in early childhood: Starting in the mainstream.* White Plains, NY: Longman.
Sainato, D. M. (1990). Classroom transitions: Organizing environments to promote independent performance in preschool children with disabilities. *Education and Treatment of Children, 13*(4), 288-297.
Sainato, D., & Lyon, S. (1989). Promoting successful mainstreaming transitions for handicapped preschool children. *Journal of Early Intervention, 13*(4), 303-314.
Salinger, T. S. (1996). *Literacy for young children* (2nd ed.). Englewood Cliffs, NJ: Merrill.
Saracho, O. N. (1993). The preparation of teachers in early childhood. In B. Spodek (Ed.), *Handbook of research on the education of young children* (pp. 412-426). New York: Macmillan.
Saracho, O. N., & Spodek, B. (1983). The preparation of teachers for bilingual bicultural early childhood classes. In O. N. Saracho & B. Spodek (Eds.), *Understanding the multicultural experience in early childhood education* (pp. 125-146). Washington, DC: National Association for the Education of Young Children.
Saracho, O. N., & Spodek, B. (1995). Preparing teachers for early childhood programs of linguistic and cultural diversity. In E. E. Garcia, B. McLaughlin, B. Spodek, & O. N. Saracho (Eds.), *Meeting the challenge of linguistic and cultural diversity in early childhood education* (Vol. 6, pp. 154-169). New York: Teachers College Press.
Schirrmacher, R. (1998). *Art and creative development for young children* (3rd ed.). Albany, NY: Delmar.
Schumm, J. S., Vaughn, S., Gordon, J., & Rothlein, L. (1994). General education teachers' beliefs, skills, and practices in planning for mainstreamed students with learning disabilities. *Teacher Education and Special Education, 17*(1), 22-34.
Sears, S., Carpenter, C., & Burstein, N. (1994). Meaningful reading instruction for learners with special needs. *The Reading Teacher, 47*(8), 632-638.
Seefeldt, C. (1997). *Social studies for the preschool-primary child* (5th ed.). Upper Saddle River, NJ: Merrill/Prentice Hall.
Silverstone, D. (1982). Considerations for listening and noise distraction. In P. Sleeman & D. Rockwell (Eds.), *Designing learning environments* (pp. 75-86). New York: Longman.
Smilansky, S., & Shefatya, L. (1990). *Facilitating play.* Gaithersburg, MD: Psychosocial and Educational Publications.
Sommer, R. (1972). *Design awareness.* New York: Holt, Rinehart, Winston.
Steele, F. (1980). Defining and developing environmental competence. In C. P. Alderfer & C. L. Cooper (Eds.), *Advances in experimental social processes* (Vol. 2, pp. 225-244). Chichester, NY: Wiley.

BEST COPY AVAILABLE

Taylor, B. J. (1993). *Early childhood program management: People and procedures.* New York: Merrill/Macmillan.
Thompson, D., & Bowers, L. (Eds.). (1989). *Where our children play: Community park playground equipment.* Reston, VA: American Alliance for Health, Physical Education, Recreation and Dance.
U.S. Consumer Product Safety Commission. (1994). *Handbook for public playground safety.* Washington, DC: U.S. Government Printing Office.
Udvari-Solner, A., & Thousand, J. (1995). Promising practices that foster inclusive education. In R. A. Villa & J. S. Thousand (Eds.), *Creating an inclusive school* (pp. 87-109). Alexandria, VA: Association for Supervision and Curriculum Development.
van Wagenberg, D., Krasner, M., & Krasner, L. C. (1981). Children planning an ideal classroom: Environmental design in an elementary school. *Environment and Behavior, 13,* 349-359.
Veatch, J. (1968). *How to teach reading with children's books* (2nd ed.). New York: Richard C. Owen.
Wang, M. C., Reynolds, M. C., & Walberg, H. J. (1994/1995). Serving students at the margins. *Educational Leadership, 52*(4), 12-16.
Weed, J. (1991). Living daily in a whole language classroom. In Y. Goodman, W. Hood, & K. Goodman (Eds.), *Organizing for whole language* (pp. 84-94). Portsmouth, NH: Heinemann.
Weinstein, C. S. (1979). The physical environment of the school: A review of the research. *Review of Educational Research, 49*(4), 577-610.
Weinstein, C. S. (1981). Classroom design as an external condition for learning. *Educational Technology, 21,* 12-19.
Weinstein, C. S., & Weinstein, N. D. (1979). Noise and reading performance in an open space school. *Journal of Educational Research, 72,* 210-213.
Winter, S. M. (1985). Toddler play behaviors and equipment choices in an outdoor play environment. In J. L. Frost & S. Sunderlin (Eds.), *When children play* (pp. 129-138). Olney, MD: Association for Childhood Education International.
Winter, S. M. (1994/95). Diversity: A program for all children. *Childhood Education, 71,* 91-95.
Winter, S. M. (1997). "SMART" planning for inclusion. *Childhood Education, 73,* 212-218.
Winter, S. M., Bell, M., & Dempsey, J. (1994). Creating play environments for children with special needs. *Childhood Education, 71,* 28-32.
Wolfgang, C. H., & Wolfgang, M. E. (1992). *School for young children.* Needham Heights, MA: Allyn & Bacon.
Wortham, S. (1992). *Childhood 1892-1992.* Olney, MD: Association for Childhood Education International.
Wortham, S. (1994). *Early childhood curriculum: Developmental bases for learning and teaching.* New York: Macmillan College Publishing.
Wortham, S. C., & Frost, J. L. (Eds.). (1990). *Playgrounds for young children: National survey and perspectives.* Reston, VA: American Alliance for Health, Physical Education, Recreation and Dance.
York, S. (1991). *Roots and wings: Affirming culture in early childhood programs.* St. Paul, MN: Redleaf Press.
York, S. (1992). *Developing roots and wings.* St. Paul, MN: Redleaf Press.

BEST COPY AVAILABLE

CHAPTER 5

Curriculum & Instruction

KEY QUESTIONS

- *What is meant by the terms "accommodation," "adaptation," and "modification"?*
- *What is the rationale for accommodating children in early childhood settings?*
- *Which planning strategies can teachers use to prepare for diverse learning needs?*
- *What is the purpose of the SMART planning system?*
- *What kinds of assessment methods are recommended in the ECI Model?*
- *How can teachers assume an active role in accommodating children?*

AIMING FOR INDIVIDUAL ACCOMMODATION

In Chapter 2, ECI programs were characterized as accommodative, with the focus on accommodating individual children and their families rather than planning for the group as a whole. Teachers strive to create learning experiences that are age-appropriate, developmentally appropriate and, most important, individually appropriate. To achieve such an individual fit, the curriculum and instruction must be differentiated. The extent and kind of accommodation needed to ensure each child's success varies.

In this book, the term "accommodation" means any measure taken for the purpose of enhancing a child's opportunities for individual success and membership in the community of learners. Accommodations can entail adjustments to the curriculum, teaching strategies and practices, equipment, materials, environmental variables, or other contextual supports. Such accommodations help children work from their areas of strength and ability, and enhance their chances for success. For some children, accommodations are needed so they can have equitable opportunities. In ECI settings, accommodations may be taken to encourage a child's active participation, enhance the child's chances for successful functioning in the program, or offer a different level of challenge. Accommodative practices can help individual children to gain developmental skills while becoming socially integrated with their peers during spontaneous, planned, and routine activities.

An accommodation may be a specific strategy or instructional technique. Specialized equipment, materials, or assistive technology also are considered accommodations. In some cases, accommodation may mean removal of certain items from the learning environment. For example, a teacher might remove some room decorations to see if certain children then would be able to maintain their attention better. Accommodation measures may be used singly, or several measures can be combined, to enhance the child's opportunities to develop and learn (Cook, Tessier, & Klein, 1996; Deiner, 1993; Miller, 1996; Polloway & Patton, 1997; Salisbury, 1991).

Accommodations may involve changes to the usual environment, equipment, materials, curriculum, activities, routines, or procedures (Archambault et al., 1993; Polloway & Patton, 1997). In this book, such changes are referred to as "adaptations" or "modifications." Adaptations can be either permanent or temporary, depending on the circumstances (Miller, 1996). When the conditions warranting the adaptation are unlikely to improve, the modifications may be permanent or long-term. One such modification is the removal of barriers or the addition of equipment to allow children with physical challenges to have access to buildings, playgrounds, or materials within the classroom. In other cases, the adaptations may be used as short-term transitions. Adaptations or modifications used as temporary props to foster learning are gradually phased out.

Adaptations or modifications may be needed to enable some children to participate in learning experiences with their peers. These adaptations can include reducing tasks, breaking a procedure into steps, decreasing or clarifying instructions, changing

input or output modes, and combining different input or output modes (Cicchelli & Ashby-Davis, 1986). For example, children who are deaf or hard of hearing may need sign language as an input mode, in addition to a teacher's verbalizations, when a story is read. Following the story, when the teacher invites the children to draw a picture and use their invented spellings to write about their favorite part of the story, a child with cerebral palsy may need the use of a computer with an adaptive keyboard and enlarged track ball mouse as an output mode.

Adjustments to time scheduling, use of classroom space, and methods of assessment can create more equitable learning opportunities (McCormick & Feeney, 1995). In some cases, adaptations or modifications to the learning environment are done to ensure not only access, but also safety (Winter, Bell, & Dempsey, 1994). For example, creating well-marked pathways from one area of the playground to another helps children who are blind or visually impaired to stay out of the path of wheeled vehicles or moving swings.

A sense of equity is promoted from efforts to accommodate individual children in a learning environment that encourages the creative, successful participation of all children (Salisbury, 1991). From this perspective, inclusion means recognizing the strengths of all children, regardless of differences in ability or other characteristics, such as language, culture, or socioeconomic level. Teachers often fail to recognize that children with high ability levels also can benefit from accommodations designed to optimize their learning potential (Archambault et al., 1993). A truly inclusive learning environment is not achieved unless teachers recognize that it is just as important to accommodate children who are gifted learners as those who experience learning problems. Moreover, teachers must be cognizant that no difference in learning or personal characteristics renders a child incapable of learning. With well-matched accommodations, all children can experience success.

It is critical to choose teaching strategies and accommodation measures that provide the level of support or challenge that children need, while preserving dignity, independence, and freedom of choice. Equally important is the awareness that children who require or benefit from accommodations for certain activities may not need special provisions for every learning activity. In fact, overuse of accommodations or the use of obtrusive accommodations may interfere with a child's acceptance and integration into the group (Barone, 1994; Salisbury, 1991; Schumm & Vaughn, 1991; Wolery, 1991). Overadaptation also could result in decreasing the challenge for the child to an unacceptable degree (Stainback, Stainback, & Stefanich, 1996), compromising children's opportunities to learn in an environment that affords high expectations and legitimate challenge.

THE RATIONALE FOR ACCOMMODATING LEARNERS

Early childhood professionals need a clear understanding of the rationale for accommodating individual learners. Three primary elements constitute this rationale. First, federal mandates obligate teachers to accommodate learning differences for certain groups of children. Second, research indicates that children fare better, increasing their chances for success, when

their learning differences are accommodated. Third, a focus on a child's strengths and abilities enhances the development of the whole child. Consequently, providing accommodations that help children use their strengths to acquire new concepts and skills in all areas of development is a critical aspect of inclusion.

Legal Obligations

Children with disabilities have guaranteed rights that must be protected in early childhood settings. The Americans With Disabilities Act (ADA) requires that reasonable steps be taken to ensure equal opportunities for the education of all citizens. Therefore, teachers are obligated to provide any reasonable accommodations needed to ensure that children with disabilities have an opportunity to engage in "like-kind" experiences in natural settings with their peers (Winter et al., 1994). The Individuals With Disabilities Education Act (IDEA) requires the provision of any supplementary aids and services necessary to support the placement of children with disabilities in general education settings (Turnbull, 1993). As stated in Chapter 1, the responsibility of schools to provide such accommodations was upheld in the case of *Greer v. Rome City School District* (Boundy, 1992; Rothstein, 1990; Underwood & Mead, 1995).

For children in the language minority, *Lau v. Nichols* (1974) ruled that special assistance needed for equitable school participation is granted to school-age children under Title VI of the Civil Rights Act (Crawford, 1991). During the 1980s, however, states received the power to determine the extent to which children in the language minority would be accommodated through instruction offered in their first language (Seefeldt & Barbour, 1994).

Equal access to educational opportunities was guaranteed to all children, regardless of gender, with passage of Title IX of the Education Amendments Act of 1972 (Underwood & Mead, 1995). Increasing attention is being given to the identification of strategies and practices that encourage girls to participate fully in learning opportunities. Research suggests that girls especially may benefit from teaching strategies that encourage their participation in mathematics and science activities (American Association of University Women, 1991).

Accommodations Promote Success

Children with disabilities. Evidence suggests that placing emphasis on accommodating individual children results in positive benefits for all the children in a group (Joint Committee on Teacher Planning for Students with Disabilities, 1995; Sharpe, York, & Knight, 1994; Staub & Peck, 1994/1995). Moreover, when providing accommodations is a priority, programs report no loss of instructional time (Hollowood, Salisbury, Rainforth, & Palombaro, 1995). Conversely, children with disabilities do not appear to fare well when learning activities are undifferentiated and teaching strategies are aimed at the group of learners as a whole. When undifferentiated, whole-group approaches are used, children with disabilities frequently assume a passive role in learning activities (Baker & Zigmond, 1990; McIntosh, Vaughn, Schumm, Haager, & Lee, 1994).

Children who are gifted and talented. Children who are gifted also seem to fare better under a differentiated approach to curriculum implementation

(Archambault et al., 1993; Subotnik, 1997), contrary to the popular misconception that gifted children do not need adjustments or adaptations. The hazard believed to be associated with a lack of accommodation for gifted children in regular classrooms is twofold: 1) these children may never reach their highest potential, and 2) boredom and lack of challenge may lead to underachievement (Purcell, 1993; Willis, 1995). The Marland Report (1971) was an important step toward wider recognition that gifted children have a need for challenges beyond the typical curriculum. While research to indicate how gifted children fare in regular classrooms is sparse, educators of gifted children strongly favor differentiating curricula, methods, and materials to meet the unique needs of these children (Archambault et al., 1993).

Linguistically and culturally diverse. Empirical research in bilingual education suggests that positive, long-term effects can be gained by supporting children's primary language development during early childhood. The extent to which children's primary languages and cultures are integrated into the program appears to be a strong predictor of subsequent academic success. Research findings suggest that in the early childhood years, primary language development is critical to conceptual development. Concepts efficiently learned through a child's primary language are then available for expression through a second language as it is acquired. This "interdependence" or "academic transfer" principle also appears to apply to literacy. The literacy skills developed in the primary language are transferable to the second language. Biliteracy, therefore, is an attainable goal and may result in enhanced language processing abilities. Conversely, programs that immerse children only in development of a second language during critical early childhood years appear to hamper cognitive development. As a result, these children frequently lag in academic achievement (Au & Kawakami, 1991; Cummins, 1986, 1989, 1993; Teachers of English to Speakers of Other Languages, Inc., 1995a, 1995b).

Gender equity. Research suggests that gender-related accommodations may help schools provide more equitable learning situations and positive academic outcomes for all children. While some concerns have been voiced regarding fairness to boys in school settings (Grossman & Grossman, 1994; McCormick, 1994), the primary focus has been on the plight of girls. In a 1991 research report, the American Association of University Women concluded that girls in American schools were being "shortchanged" (American Association of University Women, 1991). Other authors have followed suit, contending that schools are "failing at fairness" and "cheating girls" (Sadker & Sadker, 1994) and advocating for "nonsexist classrooms" (McCormick, 1994). Researchers continue to investigate whether certain teacher behaviors and instructional practices are associated with negative effects on girls' academic performance. A lack of academic self-confidence evident in many girls appears to inhibit their achievement and even their willingness to pursue more advanced work in the content areas of mathematics and science.

Identifying school variables that support the performance of boys over girls is critical. Advocates have called for the elimination of school practices that favor boys, and for a new focus on training teachers to use practices that better accommodate girls (American Association of University Women, 1991; Grossman & Grossman,

1994; Lewis, 1991; Mann, 1994; Perrett, 1988; Sadker & Sadker, 1994). A strong case can be argued for implementing early intervention measures that may help prevent negative school outcomes for girls. Research indicates that children develop their own gender identity and begin to construct their understanding of gender roles during the preschool years (Berk, 1994; Kostelnik, Stein, Whiren, & Soderman, 1993). Consequently, early childhood has been touted as a critical period for equalizing opportunities for growth, development, and learning (Derman-Sparks & ABC Task Force, 1989; Penny-Velazquez, 1995).

Development of the "Whole Child"

A major goal of inclusion is to enhance the overall development of the whole child, rather than focusing on skills in only selected areas of development. Consequently, in ECI programs, teachers facilitate both social and academic dimensions of inclusion (Miller, 1996). Implementing teaching strategies and accommodations that enhance the overall development of children helps each child achieve true "learning membership" in the program (Ferguson, Meyer, Jeanchild, Juniper, & Zingo, 1992). True inclusion requires more than the mere presence of children with multiple abilities in general early childhood settings. Teachers must plan carefully to ensure that individual children make progress. Strategies, practices, and adaptations are designed to help children achieve in all domains of development. Strategies for both social integration and instructional accommodation are important (Strain, 1990).

CHALLENGES AND BARRIERS TO ACCOMMODATION

It is important to be aware of barriers, perceived or actual, that may interfere with planning for inclusion. Despite widespread advocacy for programs designed to support the growth, development, and learning of individual children, lack of accommodation typically remains a challenge. ECI programs must overcome obstacles that prevent teachers from giving sufficient time and attention to instructional planning.

Lack of Accommodation

Disabilities. National studies demonstrate that general education teachers, kindergarten through secondary, make few adaptations for children with learning disabilities (Baker & Zigmond, 1990; Joint Committee on Teacher Planning for Students with Disabilities, 1995; McIntosh et al., 1994; Schumm & Vaughn, 1991, 1992; Schumm, Vaughn, Gordon, & Rothlein, 1994; Schumm et al., 1995). Even teachers identified by their administrators as effective and accepting of children with learning disabilities used few adaptations (McIntosh et al., 1994; Schumm & Vaughn, 1991).

Instead of providing accommodations for individual children with learning disabilities, teachers in general education settings typically use undifferentiated, whole-group instruction (Joint Committee on Teacher Planning for Students with Disabilities, 1995; McIntosh et al., 1994; Schumm & Vaughn, 1991, 1992; Schumm et al., 1995; Zigmond & Baker, 1996). When they examined the feasibility of accommo-

dating children with learning disabilities in one elementary school, Baker and Zigmond (1990) reported the use of similar teaching methods, even when data collected in the primary grades, kindergarten through 2nd grade, were aggregated and examined separately from data collected in the intermediate grades. These investigators found that teachers in this setting closely followed textbook manuals and taught lessons to the whole class. Children were not grouped for instruction, and teachers did not change the pacing of lessons or differentiate assignments. Such whole-group, undifferentiated methods are associated with passive engagement of learners (Baker & Zigmond, 1990; McIntosh et al., 1994). Lack of opportunity for active involvement in learning runs counter to accepted theories in both early childhood (Bredekamp, 1987; Bredekamp & Copple, 1997; Wortham, 1994) and early childhood special education (Allen & Schwartz, 1996; Bailey & Wolery, 1992; Cook et al., 1996; Deiner, 1993).

The age of the child appears to exert an influence on the number of accommodations. Schumm et al. (1995) report that the number of accommodations corresponds inversely with the age of the child.

Information regarding *how* adaptations are applied may yield additional insights that could prove valuable when establishing the efficacy of practices used in inclusive settings. Zigmond and Baker (1996) summarize the findings of three studies that examined the inclusion of children with learning disabilities in general elementary school classrooms, kindergarten through 6th grade. These investigators found that teachers applied adaptations globally during whole-class instruction, rather than implementing these strategies with specific children who actually require the accommodations. These findings raise questions regarding whether global applications of adaptations have sufficient power and intensity to truly accommodate individual children.

Gifted and talented. Studies focusing on gifted children in general education settings are meager (Archambault et al., 1993). Yet, these regular classrooms are the primary learning environments for the majority of children who have been identified as gifted. Typical pull-out or enrichment programs serve gifted children only 2 to 3 hours a week (Council of State Directors of Programs for the Gifted, 1987; Cox, Daniels, & Boston, 1985). Mounting evidence indicates that children who are gifted have few opportunities to develop their creative talents or be sufficiently challenged. General education teachers usually make only minor adaptations to accommodate children with high ability (Archambault et al., 1992; Archambault et al., 1993; Council of State Directors of Programs for the Gifted, 1987). John Feldhusen (1995) calls for education reform to better recognize and develop the different talents, aptitudes, and abilities of gifted children.

Linguistically and culturally diverse. Research also indicates that children in the language minority also suffer from a lack of accommodation in general education classrooms. One study of 3rd- through 5th-grade classrooms found that children in the language minority had meager opportunities to acquire language and academic skills in inclusive classrooms. An ecobehavioral analysis revealed that teachers relied heavily on whole-class instruction, lecturing for 54 percent of the day. Children were engaged in individual seatwork for 32 percent of the time. Only 2 percent of class time was spent in small-group work, which is correlated to higher language usage

among children for whom English was being acquired as a second language. Interestingly, when the inclusive general education classes were compared with English as a Second Language (ESL) classes, instructional patterns were similar. In both settings, children's most prevalent behavior was silence (96 percent of the time in the inclusion setting and 92 percent of the time in the ESL classroom). The findings of this study lend support to the contention that accommodative practices are needed to provide opportunities and support for the language and academic development of language-minority children. Moreover, this study also implies that even segregated programs may not provide adequate support for language acquisition and academic achievement (Arreaga-Mayer & Perdomo-Rivera, 1996).

Lack of accommodation for language-minority children in general education classes can exact a high toll on their self-esteem and school achievement. Gersten (1996) describes the frustration experienced by language-minority children as they made the transition into general education settings. As the content of the curriculum became more complex, some of the children experienced difficulty in comprehending lessons or using their second language to convey their understanding. Subsequently, these children were referred to special education or other compensatory programs more frequently than before their transition to general education classrooms (Gerten, 1996).

Gender. Lack of accommodation for gender differences is another serious concern. Failure to gender-balance the curriculum and recognize the contributions of women undermines the self-esteem of girls and limits their potential for success. Female children of color are even more likely to feel excluded when an ethnocentric curriculum is imposed (Butler, 1997; Tetreault, 1997). Support for girls' independence in school is meager compared to boys'. Girls are given less challenging questions and fewer problems to solve. Moreover, girls receive less attention and feedback on the tasks in which they engage (Sadker, Sadker, & Long, 1997).

Boys also suffer disadvantages when accommodation for gender is ignored. Boys are socialized into roles favoring aggression and high activity levels. Unfortunately, these behaviors are incompatible with school settings. Consequently, boys are more likely than girls to receive disciplinary action and to be identified as hyperactive (Sadker et al., 1997). At least one study's findings suggest that accommodation for gender should include attention to the composition of the school staff, in addition to the ratio of boys and girls in each class. A Belgian study found that when the teachers in school settings are predominantly female, boys appear to lack male role models, and they may have difficulty in resolving conflict between the masculine sex role behaviors they have internalized and the expectations female teachers convey (Brutsaert & Bracke, 1994).

Overcoming Barriers to Accommodation

One key to successful accommodation of all children in inclusion settings is assiduous attention to planning daily learning experiences that match children's abilities. Yet, teachers report many barriers to effective planning. Surveys reveal that scheduled planning time is often insufficient or spent on adminstrative tasks. Although the

complexity of planning for diversity warrants careful advance planning, teachers report that their accommodations for individual children frequently are planned mentally, rather than recorded in planning books. Many admit that they resort to impromptu planning of strategies during instructional time (Joint Committee on Teacher Planning for Students with Disabilities, 1995).

Teachers report a lack of child-focused planning. Curricular planning is not driven by assessment data collected for each child. Teachers reportedly allow their *impressions* of student abilities, rather than actual information collected through assessment, to influence their planning (Zigmond & Miller, 1986). They often use curricular materials that are convenient (Zigmond & Miller, 1986) or select activities they believe will be motivating to students, rather than focusing on ways to build children's skills and abilities. Teachers often are more concerned with how time will be spent, rather than how individual goals will be attained. Teachers tend to compile activities into long-range units of study, but fail to spend time sufficiently developing day-to-day learning activities (Joint Committee on Teacher Planning for Students with Disabilities, 1995). One suggestion for improving accommodation for diverse children is paying more attention to short-term planning (Joint Committee on Teacher Planning for Students with Disabilities, 1995). Time must be spent analyzing how the strengths of individual children can be used to assist their learning, determining the relevance of activities for each child's learning goals, and selecting the most effective strategies for facilitating each child's learning.

EFFECTIVE PLANNING METHODS

In the ECI Model presented in this book, planning to accommodate individual children does not mean creating separate, daily curriculum plans for each child. Nor does it mean one-on-one instruction. With careful advanced planning, a flexible, constructivist-based curriculum can provide a common basis for instruction and learning (Richarz, 1993; Winter, 1997; Wolery & Fleming, 1993). Certainly, children with identified disabilities will have an Individualized Education Program (IEP) that articulates their overall educational goals and objectives. A basic goal of inclusion, however, is to ensure that all children are able to participate as members of a community of learners. Therefore, it is critical that the curriculum and methods teachers use provide flexibility to both accommodate the goals and objectives for individual children, and draw children into cooperative situations with their peers.

The following sections suggest methods, approaches, and tools that can increase the effectiveness of planning. The aim of these methods is to increase the focus on helping individual children achieve success and membership in their community of learners.

Use a Collaborative Team Approach

It is unlikely that any single teacher could adequately meet the diverse needs of every child enrolled in an inclusion program (Fritz & Miller, 1995). Consequently, ECI programs use a collaborative team approach to plan for children's learning and evaluate their progress. An ecological orientation toward curricular planning in-

creases the chances for accomplishing a culturally responsive, individually appropriate match between young children and the strategies used to enhance learning. Multidisciplinary team arrangements that promote collaboration of teachers, specialists, and families are a powerful source of support for ECI programs (Richarz, 1993; Wolery & Fleming, 1993).

For children who are eligible for special education services, such an interdisciplinary team approach is mandated for the development and monitoring of the child's Individualized Education Program (IEP) or an Individualized Family Service Plan (IFSP) (Deiner, 1993; Mindes, Ireton, & Mardell-Czudnowski, 1996; Underwood & Mead, 1995). For all young children, vital contributions of team planning efforts include the selection of measures to accommodate individual learners, and planning the specific ways that strategies will be used to help children progress through the curriculum. Team monitoring of each child's outcomes and evaluating his developmental progress help gauge the effectiveness of strategies and accommodations (McCormick & Feeney, 1995; Salisbury, 1991; Salisbury et al., 1994; Winter, 1997). In some ECI programs, a teacher may also work in conjunction with an "inclusion facilitator" to select and implement accommodations. The inclusion facilitator helps locate resources, suggests ways to adapt lesson plans, and offers strategies for accommodating a wider range of abilities (Ferguson et al., 1992).

> ***Ms. Butler and Team Planning***
>
> *Last year, the teachers at Ms. Butler's grade level planned together every Wednesday. She found sharing curriculum ideas to be helpful. Sometimes, however, the themes or activities did not fit the interests of her students. Many times, activities planned and shared by other teachers were either too easy or too advanced for children in Ms. Butler's class. With the ECI Model, team planning is different. Teachers discuss the assessment data they have gathered, as well as the children's interests. The focus has changed from grade level or group focus, toward identifying individual children's interests and learning needs. Teachers spend more time discussing how to adjust their lesson plans to accommodate different children. Specialists attend the planning sessions to give ideas and to look for ways to integrate their interventions into usual classroom activities. This year, the focus is on team planning to support the learning of individual children, rather than on planning undifferentiated curriculum across a grade level.*

Planning transitions. Multidisciplinary team members plan strategies for preserving the continuity of children's learning across multiple learning contexts, including home, school, care settings, and community agency sites. Therefore, establishing communication among teachers, parents, and community agencies is vital when planning smooth transitions for children moving from one program or learning context to another. One study, for example, identified literacy competencies that facilitate children's transitions from preschool programs to inclusion programs at the primary level (Katims & Pierce, 1995). Multidisciplinary planning teams can ensure that instructional planning addresses various competen-

cies that might influence the success of children's transitions across early childhood settings.

> ***Building Bridges***
>
> *Early childhood teachers at Grayton Elementary School were concerned about the children who arrived for pre-kindergarten, kindergarten, and 1st grade from community child care facilities. They formed a committee to investigate ways to help these children make a smooth transition into the public elementary school. The Grayton teachers created a buddy system to support and collaborate with caregivers. They met several times a month to share ideas and exchange information about their programs. Eventually, the Grayton teachers and staff became valuable resource people for the community child care programs. Caregivers and administrative staff would call if they needed instructional ideas or wished to refer a child for diagnostic evaluation. The Grayton teachers also helped the child care facilities evaluate their programs and examine which skills and concepts could facilitate the transition of children from child care to the public school. In the spring, Grayton teachers and staff members met with families whose children would be attending their school in the fall. Parents were given opportunities to learn about Grayton and become familiar with the early childhood staff. Grayton teachers believe their efforts benefited the children, who seemed to be better prepared and able to adjust more readily. When children with developmental problems or problem behavior are identified in child care, intervention is begun immediately. Some children no longer need therapeutic intervention by the time they arrive at Grayton. Teachers and families alike are pleased.*

Selecting assistive technology. Shared decision-making is critical when considering appropriate technological options to accommodate individual children with disabilities. The planning team should include professionals with expertise in technological applications, such as occupational, physical, and speech/language therapists. Teachers who will be involved in the daily use of a child's assistive technology should receive training to prepare them for participating in decisions regarding such technology. Employing different perspectives for viewing each child's needs creates a balanced platform for decision-making (Parette, Hourcade, & VanBiervliet, 1993).

Planning a network of support. Teachers who are making decisions about what strategies to use and implementing techniques that may be new to them need to feel supported. Recognizing this need, Kronberg, Jackson, Sheets, and Rogers-Connolly (1995) devised a grid to help individuals and teams pinpoint areas of need, and to help them brainstorm the types of support that might be available. The researchers stress that encouraging personnel to articulate their needs and to select the kinds and levels of support they believe are warranted by their unique situations may lead to more successful inclusion. Creating a network of professional support may result in teachers using a more extensive repertoire of strategies and accommodations (Fuchs, Fuchs, Hamlett, Phillips, & Karns, 1995; Salisbury et al., 1994).

Existing planning systems. In some ECI programs, particularly those within elementary school settings, one may find various forms of team planning systems already in place. It is important to differentiate among various kinds of team configurations by considering the purposes and outcomes of their planning activities. For example, grade-level planning is a popular form of team planning in which all the teachers of specific grade levels meet on a regular basis. Frequently, grade-level teams focus on planning curricular content, using a whole-group approach. Teachers on these teams often departmentalize their planning, with each teacher finding activities for a single content area. While these steps are meant to be an efficient use of planning time, they discourage planning that integrates the curriculum, follows the interests of children, incorporates assessment data, and accommodates individual children. Unless these existing planning teams can integrate such critical aspects of planning for inclusion, it is best for the teams to be reconfigured toward the multidisciplinary team approach.

Role of administrators. Administrators play a key role in facilitating team planning efforts by conveying an ambiance of collaboration and creating scenarios that are conducive to cooperation. Commitment, well-established communication, and team-building efforts are required to forge the team members into a cohesive working unit. Administrators can identify and create networking arrangements with community agencies and individuals who can contribute expertise on planning, decision-making, and resource procurement. Allocating time for team planning in ECI programs is critical. It is vital for administrators to demonstrate the value of team planning by allotting sufficient time during the work day for the various functions of multidisciplinary teams. Time is needed for communication, planning, and coordination with other programs and personnel (Fritz & Miller, 1995; Hewit & Whittier, 1997; Jorgensen, 1994/1995). Between regularly scheduled meetings, team members can remain in contact through informal methods, such as telephone or E-mail.

ASSESS TO INFORM INSTRUCTION

ECI programs depend upon the collection of accurate data to identify the intraindividual attributes of children, their learning styles, and the concepts, skills, and knowledge they have acquired (Altman & Kanagawa, 1994; Garcia, 1994). Curricular planning for early childhood settings can be considered a cycle that is initiated by the assessment process (Miller, 1996; Wortham, 1996, 1998). Assessment data collected for each child drives the instructional planning process in ECI programs. Impressions of a child's ability, availability of materials, or the goals of state or local agencies do not provide the basis for planning instruction (Zigmond & Miller, 1986). Similarly, diagnostic labels applied for administrative purposes cannot inform instruction. Whether a child is labeled "gifted" or has disabilities, individual variations preclude using a label as a basis for instructional planning (Barclay & Benelli, 1994; McLean & Odom, 1993). "Recipe-style" practices recommended for use with children classified under various diagnostic labels should be considered only as suggestions. Under no circumstances should such recommendations be used in lieu

of actual data collected regularly over time for individual children. This individual assessment data should be evaluated by the multidisciplinary planning team and used to inform the instructional planning process.

Individual assessment data allows a teacher to create effective matches between the child and the curriculum, and continuous assessment provides a basis for refining that fit. Individual information must drive decisions regarding instructional activities, resource allocation, and teaching strategies (Miller, 1996; Mindes et al., 1996; Udvari-Solner & Thousand, 1995). The goal is to use information gleaned through assessment to develop each child's talents and enhance his or her individual potential (Feldhusen, 1995; National Coalition of Advocates for Students, 1991).

Vary Assessment Tools and Methods

ECI programs use a broad-based system of assessments to gain a comprehensive view of each child from different perspectives (National Coalition of Advocates for Students, 1991). Standardized norm-referenced tests are inappropriate for assessing young children, especially those who are "at risk." Instead, methods that are natural and do not promote competition among children are preferable (Southern Regional Education Board, 1994). Using multiple methods can ensure accuracy and enable teachers to monitor a child's progress in each developmental domain, providing an evaluation of the whole child (Fox, Hanline, Vail, & Galant, 1994; Richarz, 1993; Winter, 1997). Computer technology makes using multiple assessment tools convenient and effective, as it is possible to aggregate the results of multiple assessments quickly and easily (Irvin & Walker, 1994). Multidomain criterion-referenced assessments are also available; some forms of multidomain assessments are linked through computer technology to software programs that suggest possible instructional strategies (Benner, 1992).

Use Authentic Assessment

Authentic assessments, such as play-based measures, systematic observation, portfolios, curriculum-based measures, and authentic performance assessments, are valuable tools for determining children's progress in development and learning (Benner, 1992; Bergen, 1993; Kindsvatter, Wilen, & Ishler, 1996; Miller, 1996). Moreover, performance is assessed within an authentic context (Wiggins, 1996/97). Alternative measures are sensitive to individual variations in performance and changes in children's development. Additionally, these assessments are efficient in the use of time and personnel (Mindes et al., 1996). These characteristics make alternative assessments appealing for use in ECI programs, which emphasize achieving an individual fit between children and learning experiences.

As authentic assessment is sensitive to variations in learning styles and ability levels, it is widely recommended for use when children are linguistically and culturally diverse (Garcia, 1994; Gonzalez, Brusca-Vega, & Yawkey, 1997). Authentic assessment can help identify minority, economically disadvantaged children who are gifted and talented (Wright & Borland, 1993), and teachers are better able to plan for the instruction of children with disabilities by using the results of authentic assessments (Pike & Salend, 1995; Wesson & King, 1996). Using a combination of several forms of authentic assessment as tools, teachers can efficiently accumulate an accurate data bank to inform their team planning.

Embed Authentic Assessment Into Curricular Experiences

An emphasis on authentic contexts for learning in ECI settings creates a wealth of circumstances that are ideal for authentic assessment. Community-based learning experiences provide the most authentic contexts for children to perform tasks that demonstrate learning or offer evidence of developmental progress. Classroom scenarios that re-create community settings or create authentic reasons for children to interact also can afford varying degrees of authenticity. Thematic units, projects, cooperative learning, and play are some ideal situations for embedding authentic performance assessments (Kindsvatter et al., 1996; Linn & Gronlund, 1995; Miller, 1996; Mindes et al., 1996). Technological resources also offer many possible authentic tasks (Means & Olson, 1994). Embedded assessments clearly exemplify the connection between assessment and instruction, providing instant feedback to children and reinforcing hands-on learning methods (Shavelson & Baxter, 1992).

While authentic performance assessments are complex, they are rich sources of information about the knowledge children have constructed. Moreover, children demonstrate their ability to integrate knowledge across learning domains and give teachers insight into their process of learning (Bergen, 1993). Observing the play and cooperative learning experiences of young children affords opportunities to document their progress in language, social, and problem-solving skills (Winter, 1997).

Authentic assessments are particularly advantageous for children from low-income families that are linguistically and culturally diverse. Teachers of these children historically have relied on rote learning methods and the decontextualization of skills, tactics that decrease minority children's chances for success. Authentic assessments appear to hold promise in helping teachers recognize these children's capabilities. These assessments are flexible enough to accommodate differences in learning styles and modes of thinking (Garcia, 1994). Some would argue that authentic assessments, such as portfolios, are more reliable sources of information than psychometric measures when children are culturally and linguistically diverse (Gonzalez et al., 1997).

Assess and Document Using Portfolios

Portfolio assessment is used in ECI programs to evaluate and document the developmental progress of individual children. These portfolios include samples of children's work and records of observations taken during children's engagement in play and learning experiences. Evidence documenting children's progress is systematically compiled and analyzed by teachers, specialists, administrators, and parents. Teachers also involve the children in the process of selecting and evaluating their work samples (Pike & Salend, 1995; Wesson & King, 1996; Wright & Borland, 1993), allowing them to become responsible partners in the learning process and to gain a sense of ownership. Children can learn to monitor their own progress toward individual learning goals. By encouraging children to focus on metacognition (becoming conscious of learning processes and strategies), portfolio assessment also implants the notion of lifelong learning (Pike & Salend, 1995; Wesson & King, 1996; Wolf, LeMahieu, & Eresh, 1992).

The versatility of portfolio assessment enables teachers to customize assessment for

diverse young children. Each child and family can participate in the collection of data, to the degree that is feasible, considering their individual circumstances. Samples selected from authentic experiences and learning activities strengthen the link between assessment and instruction (Gonzalez et al., 1997; Pike & Salend, 1995; Wesson & King, 1996). When children are economically disadvantaged and/or represent a cultural, racial, or ethnic minority, their talents may be obscured. Portfolio assessment has been used successfully in identifying the gifts and talents of these children. This type of assessment can serve as a springboard for curricular adaptations to match the learning needs of culturally diverse young children (Coleman, 1994).

Teachers in ECI programs rely on various technological methods to accumulate and store data for portfolios. Photographs, videotapes, audiocassettes, and other media can be placed in folders or boxes used to store portfolio data. Electronic portfolios on diskettes or compact disks offer incredible storage, taking a mere fraction of the space required for typical portfolios. Additionally, electronic portfolios afford all sorts of creative options. Children can record language or reading samples onto audiotape cassettes, or record them directly into computers with multimedia capabilities. Color flatbed scanners enable teachers to preserve children's two-dimensional drawings, while three-dimensional artwork or other products can be photographed using digital cameras (relieving children of the difficult choice of whether to leave their precious artwork and stories at school or take them home). Teacher's observations and notes can be collected and stored with word processing software. Commercial electronic portfolio programs based on a hypercard format are available for compiling these artifacts in an organized manner. Some versions, such as *The Grady Profile*, are shell-type programs that provide templates for convenience. Others, such as *Clarisworks* and *Digital Chisel*, are open-ended multipurpose software packages that allow teachers to customize the portfolios.

Ensure Culturally Responsive and Ethical Authentic Assessment

Assessment used to inform instructional planning for ECI programs is ethical, culture-fair, and gender-fair. Care must be used to ensure that accurate, unbiased practices are used when collecting and interpreting data. Collecting various kinds of data, rather than relying on a single assessment format, increases the chances for accuracy. Such data could be a combination of teacher and parent observations, work samples, and authentic performance captured by media. Establishing rubrics, a set of criteria for evaluating the data, also increases the likelihood of valid interpretations. When rubrics are shared as part of an assessment portfolio, moreover, these tools help others to understand how the data was evaluated (McAfee & Leong, 1997; Wesson & King, 1996; Wiggins, 1996/97; Wright & Borland, 1993). Captions for work samples that describe the context of the sample and reasons for including the item in a portfolio help families, other teachers, and specialists to understand the significance of the sample (Pike & Salend, 1995). When criteria for evaluation are shared, children's assessment portfolios can become a powerful communication tool that may smooth transitions for children between home and school or from one program to another (Wesson & King, 1996).

Involving families. Family priorities and values may be incorporated into the assessment system and processes. Identification of family strengths and influences is a critical aspect of assessment (Mindes et al., 1996). Consequently, family members should be involved in contributing to, and evaluating, portfolios; this may best be accomplished through providing family members regular opportunities to contribute anecdotes about their child, in addition to follow-up discussions during parent-teacher conferences (Wright & Borland, 1993). Family members' insights are valuable for gaining an understanding of the cultural and intraindividual aspects of children's work samples. Interpretations of children's progress are more accurate when the cultural lens of the family is available to help teachers view the child from other perspectives. Teachers in ECI programs understand that cultural differences in interactional patterns may interfere with a child's participation in authentic learning and assessment (Au, 1993; Garcia, 1994; Harry, 1992). Furthermore, empirical evidence suggests that parents of minority children can help teachers identify children who have exceptional gifts and talents (Karnes, 1990).

Staff development. Ongoing staff development ensures the valid use of portfolios and other authentic assessment methods, as teachers learn ways to design and evaluate such assessments. Effective staff development would provide teachers with opportunities to practice methods of structuring their observations to increase the validity of the data collected. They would learn to prepare checklists, anecdotal records, running records, error analysis, and other forms of documentation (Pike & Salend, 1995; Wright & Borland, 1993). Information about second language acquisition and its implications for assessment also would be imparted. It is vital for teachers of linguistically diverse young children to understand how to assess and document a child's conceptual development. Uninformed teachers may not recognize those times when children understand a concept in their first language, but are unable to express that understanding using their developing second language. The cognitive skills of children who speak in a dialect also are underestimated (Garcia, 1994).

Staff development keeps teachers, specialists, and other auxiliary personnel informed of the legal rights and protections afforded to children and their families regarding assessment and documentation. Discriminatory use of assessment results is prohibited by law. Care must be taken to ensure objectivity and impartiality when collecting and interpreting all assessment data. The *Lau v. Nichols* (1974) court decision established the rights of children to be assessed in their primary language. Consequently, when children in linguistically diverse inclusion settings are assessed, multidisciplinary planning teams must ensure that teachers or staff who speak the children's primary language be present during assessments and help with data interpretation. Children and their families are guaranteed access to school records, including portfolios and assessment documentation, by the Family Educational Rights and Privacy Act of 1974 (P.L. 93-380). The Individuals With Disabilities Act of 1990 (P.L. 101-576) guarantees these and other rights to children with disabilities and their families. Both of these mandates provide families with the right to due process, meaning that families have the right to a hearing when they believe their rights have been breached. Beyond these mandates, teachers have an ethical and legal obligation

to protect the privacy of children and their families. Teachers must refrain from conveying potentially damaging remarks, either orally or in written form. Records and documentation must be used solely for professional purposes, and they must be properly secured to ensure confidentiality (McAfee & Leong, 1997).

Use Ecobehavioral Assessments

Ecobehavioral assessments are flexible instruments designed to analyze comprehensively the multiple aspects of ECI settings. While global measures, such as the Early Childhood Environmental Rating Scale (ECERS) (Harms & Clifford, 1980), give an overall view of quality, ecobehavioral measures permit an in-depth analysis (Carta, Atwater, Schwartz, & Miller, 1990). This form of assessment can provide an intensive analysis of a classroom as a whole, or it can focus on how individual children function within an educational setting. Ecobehavioral assessments use multiple variables (related to physical environment, teaching behaviors, children's behaviors, and types of learning activities) to allow a more comprehensive examination of learning environments. The key advantage of this type of assessment is its focus on the interaction of the instructional environment and the behaviors of teachers and children (Arreaga-Mayer & Perdomo-Rivera, 1996).

In short, this type of assessment provides a series of "snapshots" detailing learning events that occur within the context of a particular educational setting. Collected data describe the participants, ecological factors, behaviors of children, and strategies of teachers that occur during the learning activity or episode. From these snapshots, profiles of a classroom can be drawn or the functioning of targeted children analyzed. Such ecobehavioral profiles can provide valuable data for decision-making.

Information from ecobehavioral measures can help multidisciplinary planning teams determine the efficacy of learning environments for individual children. Consequently, this data can lead to more informed decisions about instruction of individual children and planning for their continuous progress. Collaborative planning teams must consider various contexts. Certainly, the efficacy of the current early childhood setting, as stated initially, is of prime concern. Children's progress across contexts, such as home, school, and afterschool programs, also is considered critical to achieving the goals of inclusion. For young children with disabilities, a number of community agencies may be involved in their care and education at various community sites. Ecobehavioral assessment tools make it possible to analyze and compare different aspects of these settings, which helps for planning smoother transitions. Furthermore, the data generated by ecobehavioral analysis can be used to facilitate collaborative planning by personnel and families across these contexts.

By analyzing and comparing specific aspects of learning environments, collaborative teams can make placement decisions, especially when children need learning environments that provide specific kinds of support. The information yielded can help early childhood professionals decide on placement sites that are most likely to result in benefits and success for linguistic-minority children (Arreaga-Mayer & Perdomo-Rivera, 1996) and those with disabilities (Carta et al., 1990). Ecobehavioral analysis also has been used in early childhood special education to compare special

preschools to regular kindergartens, or to analyze the functioning of specific children within these programs. ESCAPE (Ecobehavioral System for the Complex Assessment of Preschool Environments) (Carta, Greenwood, & Atwater, 1985) is an instrument that can be used to evaluate the quality of preschool environments, and to evaluate children's behaviors within those settings (Carta et al., 1990).

Ecobehavioral analysis has been used as a method to identify the conditions and elements of programs that result in higher achievement for language-minority children. Different types of programs have been analyzed, using measures such as the Ecobehavioral System for the Contextual Recording of Interactional Bilingual Environments (ESCRIBE) (Arreaga-Mayer, Carta, & Tapia, 1992). These instruments help planning teams determine the kinds of opportunities for learning and acquiring a second language that are available to language-minority children in various educational settings. Instructional techniques used to facilitate the language and learning of linguistically diverse populations of children can be better evaluated when the contexts of the classroom setting are included in the analysis (Arreaga-Mayer & Perdomo-Rivera, 1996).

Ecobehavioral measures such as the Assessment Code/Checklist for the Evaluation of Survival Skills (ACCESS) (Atwater, Carta, & Schwartz, 1989) can be used to gauge a child's current functioning in a setting, or to help determine what kinds of skills and behaviors a child will need to function in a new setting (Carta et al., 1990). Consequently, these measures can be used to plan the transition of children with special needs from one community-based program to another, or from one classroom to another within an inclusion program. It is conceivable that ecobehavioral types of assessment tools could be used in making decisions regarding the placement of children with other characteristics, such as those identified as gifted and talented.

Getting To Know You

Mr. Garrett plans some type of assessment for each day. Sometimes, it is a task he places in a learning center. Yesterday, as he watched children play a computerized math game, he gained more information about their concept of number, as well as about their counting ability. Mr. Garrett often targets individual children when collecting assessment data. He observes or gives children specific assessment tasks and then records their performance, using a computer software package. Targeting particular children ensures that each child is reviewed on a regular basis. Methods of assessment are integrated into Mr. Garrett's lesson plans. "I'm surprised at the amount of valuable information I can gather in a few weeks," he says. "Planning ahead is the key to collecting data. Now I don't wait until report cards are due to gather assessment information."

DIFFERENTIATED LEARNING EXPERIENCES AND TEACHING STRATEGIES

A key goal of ECI programs is to provide learning experiences that afford individual children opportunities for daily success. In Chapter 2, a case was made for a constructivist-based curriculum that emphasized authentic learning experiences. Furthermore, it was argued that meeting the

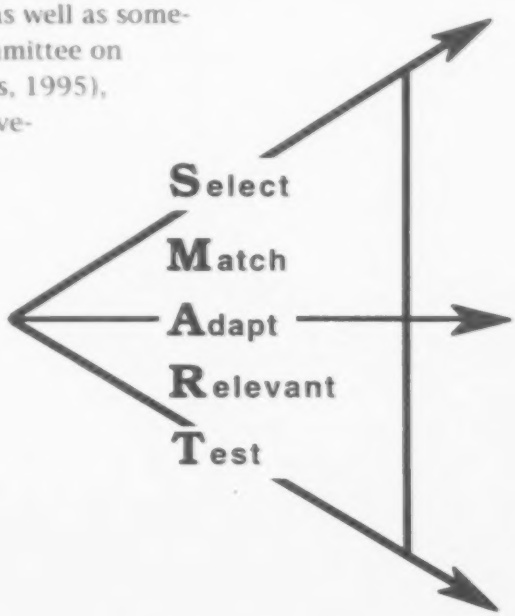
goals of inclusion requires a differentiated approach to curriculum and instruction. The challenge is to abandon the whole-group, one-size-fits-all mentality of instructional planning that is well-recognized as insufficient for teaching in inclusion settings (Renzulli, 1994; Schumm et al., 1995; Winter & Van Reusen, 1997).

In previous chapters, methods of creating a socio-organizational and physical learning environment that supports differentiated learning experiences were discussed. It was argued that arranging the indoor environment into learning centers, and scheduling large blocks of time for children to engage in activities within these centers, was critical to the success of a differentiated approach. ECI programs must offer a palette of learning opportunities that incorporate a variety of choices and multiple levels of challenge. Planning for ECI classrooms also must take into account that multiple learning experiences occur simultaneously throughout the classroom. Some of these experiences may be opportunities to work independently, while others involve cooperative learning with peers to enhance social and communication skill development. Teachers, specialists, and assistants serve a critical role in facilitating children's learning by conversing or playing with children, asking questions, or posing problem-solving situations (Bodrova & Leong, 1996; Vygotsky, 1978). Consequently, teaching strategies to enhance individual children's learning are vital to advance planning. ECI programs frequently involve team-teaching arrangements with specialists, and the presence of assistants to aid in the instruction and care of children. Therefore, activities and staff must be coordinated.

Use Advance Planning Tools and Methods

Various planning tools and strategies have been devised to help teams and teachers streamline the complex task of advance planning to meet the needs of individual children in diverse groups. Given the lack of time generally allotted for instructional planning, as well as sometimes ineffective teaching methods (Joint Committee on Teacher Planning for Students with Disabilities, 1995), it is vital to improve the efficiency and effectiveness of instructional planning.

The "SMART" planning system. The "SMART" planning system acronym (Winter, 1997) cues planning teams and teachers to consider key aspects of instructional planning targeted in the ECI model. As planners focus on these elements, they can improve the efficiency of their preparation and the effectiveness of their teaching.



S = SELECT

The term "select" serves as a reminder to make careful decisions regarding curriculum models, methods of instruction, learning activities, and materials that will be used in an inclusion setting. The goal is to select a curriculum and instruction model that can accommodate a diverse group of young children, representing a wide range of needs and abilities. As flexibility is critical, constructivist-based models that support a child-centered, interdisciplinary approach to curriculum development are favored. Children are involved in hands-on activities and authentic experiences. These holistic curriculum models focus on conceptual development for meaning, rather than on piecemeal development of isolated skills. The flexibility of the curricular activities allows for accommodation of individual strengths and learning styles.

M = MATCH

Planning learning opportunities that provide the appropriate level of challenge for each child requires the identification of each child's strengths and preferred learning style. It also is important to understand the cultural, linguistic, and developmental influences that affect each child. By encouraging cooperative learning, and by stocking learning centers with activities that represent multiple levels of challenge, teachers can create good matches between the curriculum and the children. Teachers match their own teaching strategies, degrees of assistance, and kinds of encouragement to the needs of individual children.

A = ADAPT

Some children require adaptations or modifications to the curriculum, activities, or materials. They may need specialized equipment or assistive technology to help them participate or to increase their engagement in learning activities. Teachers avoid focusing undue attention on children's differences by using only those adaptations that are needed. Technology offers many unobtrusive ways to meet a wide range of abilities.

R = RELEVANT

Using a holistic, experience-oriented curriculum increases the relevance of instruction. Teachers must evaluate the authenticity of their instructional plans. Each learning experience should contribute to the child's development, learning, and functional life skills. Authentic experiences that are personally and culturally relevant motivate children to gain generalizable skills and concepts.

T = TEST

An ongoing flow of assessment data informs instructional planning in ECI settings. Authentic assessment is the primary mode of acquiring such data, which is used to plan opportunities for each child to experience continuous progress and daily success. Children are involved in preparing portfolio assessments and reflecting on their own progress. Authentic performance assessments are embedded into play, community-based experiences, and other curricular activities. Technological tools help teachers accumulate, store, and analyze individual data.

Tools and processes for planning curricular content. The early childhood curriculum primarily emphasizes development. Often, curricular content and instructional goals are subsumed in children's daily routines and natural play activities (Bricker & Cripe, 1992; Salisbury et al., 1994). As children enter the primary grades, the curriculum changes as they are introduced to subject area concepts using integrated, interdisciplinary approaches. Thematic units of study or projects based on children's interests can be highly successful ways to motivate young children to learn, particularly when children are involved in the selection of topics (Katz & Chard, 1989; Miller, 1996). Moreover, when a variety of activities and experiences compose the thematic unit, teachers can draw upon children's varied and unique talents (Rittenhouse & Blough, 1995). Unfortunately, many teachers are pressured more and more about covering those curricular objectives mandated at the state or district levels (Schumm et al., 1995). Curriculum and instruction in ECI programs, however, must meet a broad range of developmental levels. A number of different types of instructional planning tools can be adapted to help differentiate the curriculum.

Pyramid planning systems can address the complexity of thinking involved in curricular material. Using a graphic organizer in the shape of a pyramid, teachers divide the curriculum content into three layers that serve as a framework for curricular planning. At the base of the pyramid, teachers place curriculum content that all children will learn. The middle layer lists content that most of the children are capable of learning. The smallest layer, at the peak of the pyramid, represents what some children will learn. This level also addresses what some children may need in order to acquire prerequisite skills, or it may describe enrichment activities for children who need additional challenges. This system also serves as a basis for assessment and as a vehicle for facilitating collaborative planning of teachers and specialists (Schumm, Vaughn, & Harris, 1997).

When teachers and children have decided on a thematic unit topic or project to explore, the planning team can brainstorm the kinds of curricular content that will be incorporated into learning experiences. At the base of the pyramid, ECI teachers can place the concepts, skills, and vocabulary that are feasible for all children to acquire. The middle and peak layers help teachers begin to differentiate curricular content for children of varying ability levels and experience. Using the pyramid as a guide, teachers can ensure that they have planned unit-related activities for learning centers that address the full range of abilities in the group. This tool also can serve as a basis for assessment of content-related knowledge, helping teachers differentiate the curricular content to match the needs of individual learners.

Children who are gifted often benefit from "curriculum compacting," a method that allows children to accelerate through a streamlined version of the curriculum, or to skip content they already know. This idea originated as a component of Renzulli's (1977) early model for developing programs for children who are gifted, called the Enrichment Triad Model. The curriculum compacting procedure was designed to prevent able learners from experiencing the frustration of marking time while other children catch up. Instead of reiterating content they already have mastered, gifted children can spend time engaged in learning activities that provide an appropriate

level of challenge (Eanes, 1997; Kennedy, 1995; Reis & Renzulli, 1992; Renzulli, 1977).

While curriculum-based paper-and-pencil tests are sometimes used to measure older children's mastery of the curriculum, authentic assessment methods provide the most appropriate ways to measure children's understanding in the primary grades. Maker, Nielson, and Rogers (1994) introduced an authentic performance-based assessment tool that doubles as a curriculum planning tool. They devised a matrix based upon Gardner's (1983) conceptualization of multiple intelligences and upon his premise that intelligence involves the use of problem-solving. The matrix crosses Gardner's seven intelligences with five problem types that are arranged in a hierarchy of increasing difficulty. This instrument has been used successfully in settings with culturally and linguistically diverse children.

As an assessment tool, the matrix appears to be a culture-fair and gender-fair instrument, with validity for helping to identify children's unique talents and those who are truly gifted. As a curriculum planning tool, the matrix helps teachers plan learning activities for children at different levels of challenge. The instrument lends itself to an interdisciplinary approach to curriculum that is child-centered, uses noncompetitive activities, and encourages active, hands-on interactions. Children are encouraged to use different modes of expression, incorporate their culture, and produce different kinds of products to convey the outcomes of their problem-solving. Teachers are able to plan for various groupings and types of learning activities that occur in a flexible, open-space classroom setting with learning centers. It is also useful in planning authentic learning experiences that occur in community settings. This method acknowledges children's diversity, individual strengths, and learning styles. Using this system, ECI teachers can create learning environments for children that are accepting of differences, encourage creativity, and provide challenge with different levels of problem-solving (Maker, Nielson, & Rogers, 1994).

Tools for planning teaching strategies. One tool that is consistent with a constructivist approach to curriculum and that gives teachers insight during thematic unit planning is a "thinking frame." Through this method, teachers analyze the unit content to determine which thinking processes the theme might engender. Teachers plan questions and facilitation strategies to stimulate and enhance children's use of these thinking processes and to advance their metacognitive awareness (Joint Committee on Teacher Planning for Students with Disabilities, 1995). Taxonomies of thinking offer other methods of planning teaching strategies for differentiated instruction. Teachers tend to ask questions at a literal level, which fails to provide sufficient inducement for children to use higher levels of thought. Taxonomies can help teachers create lesson plans that incorporate questions encompassing a full range of cognitive challenges (Eanes, 1997). A well-known example is Bloom's Taxonomy, a categorization system composed of identifiable cognitive processes arranged hierarchically (Bloom, 1956). This system and others are useful for stimulating children's thinking at various cognitive levels, including for children who are gifted (Renzulli & Reis, 1986).

ECI teachers use these tools in three primary ways. First, taxonomies can be used to design objectives for individual children at various levels of intellectual challenge. Second, teachers analyze curricular activities to determine the kinds of thinking skills

these experiences can stimulate. Third, teachers use taxonomies to plan questions and strategies for stimulating children's thinking to higher levels of cognition. These methods help teachers match the curriculum and instruction to the needs of individual children.

An increasing array of technological tools are available for organizing and storing the results of instructional planning efforts. For example, *Lesson Plan Designer Plus* by Super School Software has multiple planning features, such as lesson, curriculum, assessment, and classroom management planning segments. This software product is also useful for collaborative teaching projects and staff development training. *KidDesk* by Edmark provides a novel tool for differentiating and personalizing instruction for children beginning in prekindergarten. Each child sharing the computer has a personalized "desktop" that resembles an actual desk. Teachers and other children can send E-mail or voice mail to children's desktops. Teachers can provide feedback and encouragement using these communication modes. *KidDesk* interfaces with various educational software packages, helping to differentiate instruction. Level settings are saved automatically on the individual desktop, allowing teachers to plan children's computer assignments in advance. Also, teachers can structure collaboration on projects through desktop instructions.

Effective Community-based Instruction

Whether learning experiences are provided in the early childhood setting or through community-based field trips, teachers recognize that advance planning is critical to each child's successful participation. Advance planning and coordination with personnel at community sites ensures that field trips have value beyond a quick-paced, superficial tour. Together, teachers and personnel plan ways to concentrate on certain aspects of the on-site visit. Rather than seeing everything at the site, they plan for children's involvement in a hands-on experience that allows for horizontal elaboration of learning.

The Bakery Visit

Alberto, a 6-year-old immigrant, brought Mexican pan dulce (sweet rolls) to share with his classmates at snacktime. The children in Ms. Howard's mixed-age primary class were intrigued with the different colors and shapes of the rolls. They wanted to know how the pan dulce were made and by whom, and so Ms. Howard invited children to record their questions. One group of children worked together, using their invented spelling, to write a list. Using a language experience approach, Ms. Howard worked with another group, writing the children's dictated questions on a large sheet of chart paper. Two children who are hard of hearing were members of Ms. Howard's group. They used manual sign to dictate their questions through an interpreter. Several children collaborated with Amy, who has cerebral palsy. They discussed what they wanted to know and helped Amy use an adaptive keyboard to record their questions on a computer.

That afternoon, Ms. Howard called the bakery and scheduled a field trip. The baker and the teacher planned concrete experiences that would help the

children find answers to their questions. The next morning during learning centers, the children worked with activities and materials related to the upcoming bakery excursion. Ms. Collins, a special education teacher, helped the two children who were hard of hearing become familiar with vocabulary related to baking. Using pictures, oral communication, and manual sign to stimulate their conversation, she encouraged these children to communicate about their previous experiences in the kitchen. Three children, including one who was gifted, explored Web sites suggested by the gifted teacher. They discovered that different kinds of breads are eaten by people throughout the world. Ms. Howard encouraged them to summarize what they had learned using The Amazing Writing Machine, a child-oriented word processing and drawing software package. In the library corner, Ms. Garza, the bilingual teacher, read a story about bakeries in Spanish. Alberto, whose first language is Spanish, listened along with Stacy and Jon, who speak English.

On the day of the trip, Ms. Howard remembered to take along the battery-operated auditory enhancement devices for the children who were hard of hearing. Ms. Howard asked the bakery host to wear it so these children could hear and participate more fully. At the bakery, the children helped assemble the dough for the pan dulce, inspecting each ingredient before they mixed it into the bowl. The children were excited about its spongy texture as they kneaded it. Ms. Howard particularly encouraged Amy to squeeze the dough. The occupational therapist suggested that this exercise would help strengthen Amy's weak finger muscles. This manipulative experience allowed all the children to gain sensory impressions while enriching their vocabulary. Later, as the children sampled the treats they had helped prepare, Ms. Howard used questioning to help them make comparisons between raw dough and baked rolls.

After the field trip, the children helped Ms. Howard set up the dramatic play area to look like a bakery, using real kitchen utensils, pans, and bowls. The bakery manager allowed her to borrow some chef's hats and aprons, which added greater authenticity to the play themes. Ms. Howard observed that play activities in this area allowed Alberto and Marisa to use their emerging English for natural communication with their peers. During her planning period, Ms. Howard recorded all her observations on a laptop computer. Throughout the next week, the children drew, talked, and wrote stories about their bakery visit. Ms. Howard made sure that plenty of children's literature selections were available in the library corner that related to the experience. The children made pretend sweet bread with play dough in the art center and sometimes used the dough as a prop in the dramatic play area. Some of the children wanted to know more about Alberto's home country of Mexico and what other foods his family enjoyed. This gave Ms. Howard an idea. She talked to Alberto's mother, who eagerly agreed to help the children make tortillas the following week. The children learned more about Alberto's family customs as they engaged in conversations while preparing the tortillas.

Plan Teaching Strategies and Accommodations in Advance

The importance of advance planning to identify curricular content is well-recognized (Bredekamp & Rosegrant, 1992, 1995; Wortham, 1994). Unfortunately, a national report indicates that teachers in general education classrooms that include children with disabilities, kindergarten through secondary, have only minimal time for instructional planning. Moreover, teachers are more likely to spend this time focusing on the selection of instructional activities or classroom management strategies, rather than planning specific teaching strategies or accommodations keyed to the needs of individual children (Joint Committee on Teacher Planning for Students with Disabilities, 1995). Lack of such advance planning may undermine the effectiveness of instruction in inclusion programs. When teachers resort to improvisation, learning situations may lack sufficient power to maximize the development of children with disabilities (Salisbury, 1991; Salisbury et al., 1994).

Goals for Selecting Strategies and Accommodations

The major goals teachers endeavor to accomplish through the use of teaching strategies and accommodations are as follows: 1) encouraging children's high-quality engagement with learning activities or interactions with their peers, 2) streamlining the learning processes, and 3) providing the scaffolding needed to extend children's knowledge and skills (Eanes, 1997; Eggen & Kauchak, 1996; Polloway & Patton, 1997).

Encourage engagement. The amount of time children spend engaged in learning activities relates positively to achievement. High engagement is more likely if good management of the learning environment limits interruptions and minimizes disruptive behaviors (McWilliam & Bailey, 1992; Polloway & Patton, 1997; Wang, Haertel, & Walberg, 1993/94). Some children, such as those with Attention Deficit Hyperactivity Disorder (ADHD), may have difficulty initiating or maintaining engagement for a sufficient amount of time. Beyond disabilities, children evidence social and cognitive variations that influence their degrees of engagement (Altman & Kanagawa, 1994).

McWilliam and Bailey (1992) reconceptualize engagement to include not only time, but also the quality of the interaction. They identified five levels, from nonengagement to sustained engagement, that describe the degree of competence children may exhibit during their interactions with the people or objects. For example, a child at Level II, Transient Engagement, engages in activities briefly and does not elaborate upon, or overcome, challenges. In contrast, a child interacting at Level V, Sustained Engagement, remains engaged in goal-directed interactions for a prolonged period of time and uses various strategies to solve problems. According to this reconceptualization, the level of engagement affects the chances for the child to gain competence or mastery of skills (McWilliam & Bailey, 1992).

In the case of a child who is gifted, strategies and accommodations might be aimed at creating a learning environment that allows for various lengths of temporal engagement, depending on the nature of the task and the goals the child is pursuing. At times, accommodation may require changing a time frame to allow for prolonged

engagement in a learning activity. In other situations, these learners may benefit from spending less time engaged in learning activities, in recognition of their rapid acquisition of concepts and skills (Hanninen, 1994; Kennedy, 1995; Sternberg & Zhang, 1995).

> ***Lucy***
>
> *Lucy, a child with ADHD, dumps a puzzle out and manipulates the pieces for a few seconds, then leaves it strewn about on the table. She runs to the art center, applies paint in bold splashes across the art easel, and dashes to the block center. Lucy never plays for more than a minute at each activity, and she leaves a path of destruction in her wake. The teacher might strive to use strategies that help Lucy increase the amount of time she spends productively engaged with an activity. Lucy also experiences difficulty becoming involved in play situations with her peers. Facilitation may be needed to help Lucy learn ways to initiate involvement with peers and remain an active participant in a play episode.*

Teach learning strategies. Some children may require help acquiring or streamlining learning strategies for processing information and solving problems. Other children may exhibit a disorganized approach to learning, applying strategies ineffectively and limiting what they can gain from engagement in the learning activity. Teachers can model more effective strategies or demonstrate more proficient use of existing strategies (Polloway & Patton, 1997). Some studies indicate that parents of young gifted children can model and teach learning strategies to their children during natural play interactions (Moss, 1992).

Provide scaffolding. The third objective of accommodations addresses those measures a teacher may employ to encourage a child to move beyond what the child can learn independently. Vygotsky recognized that teachers could provide learners with a scaffolding, or framework, that would allow learners to operate in their "zone of proximal development" (ZPD), an area beyond their independent learning capability. While a child is unable to function independently within this zone, the assistance of a more capable child or an adult enables the child to move into this more advanced level. Consequently, teachers can question, model, guide, or present challenges as strategies to advance the learning of individual children (Bodrova & Leong, 1996; Eggen & Kauchak, 1996).

Embed Teaching Strategies in a High-Quality Program

While selecting and using effective teaching strategies and accommodations is vital, ensuring that the underlying early childhood program reflects high quality is also critical. Day-to-day strategies for accommodating individual learners should be embedded in the overall program structure. As discussed in Chapter 2, the theoretical and curricular structure of the inclusive early childhood program must be carefully designed to reflect high standards and meet the needs of all the children it serves. Administrative support, relationships with families, and community resources are among the many planks of support that provide a strong foundation for inclusive programs (Winter & Van Reusen, 1997).

Extant research indicates that high-quality early childhood environments can positively affect children's behaviors and development (Bailey, Harms, & Clifford, 1983). Consequently, attention to factors that influence the ecology of the early childhood program may influence efforts to accommodate children in that setting. Without a strong programmatic foundation, the strength of strategies alone, or the expertise of teachers in implementing them, may be insufficient for optimizing children's learning. When embedded in a high-quality early childhood program, however, powerful strategies that are well-matched to individual children are more likely to yield positive results.

Bailey and McWilliams (1990) express concern regarding the common practice of contracting with community child care facilities to provide early intervention for young children with disabilities in an inclusive environment. Citing research that indicates the poor quality of typical child care, they urge caution. Periodic consultation with school personnel may not be sufficient when adult-to-child ratios are poor, and when caregivers lack the skills and training needed for successful early intervention (Bailey & McWilliams, 1990). Such arrangements can work if efforts to ensure high quality are undertaken by the school and the child care facility. Schools can share training opportunities and create mentoring relationships between child care staff and faculty members in nearby schools. In some cases, it may be possible for schools to offer salary subsidies to attract child care staff with higher qualifications and to aid in retention of those staff members.

Plan the Scope of Accommodations

When accommodations are needed for individual children, the scope of implementation must be considered. For optimal success of individual children and to achieve the improvement of all children, certain accommodations may require long-term schoolwide implementation. Simply changing practices in a single classroom over the course of a school year may be insufficient. Consequently, accommodation schemes that suit inclusion settings have garnered attention. For example, Renzulli (1994) announced his intent to revamp his original schoolwide enrichment model to create a better fit for gifted children. For children with disabilities who require specialized equipment or other accommodations, programs are legally bound to provide these services as extensively as necessary, across all learning contexts.

Sign Language for Schoolwide Communication

An elementary school serving a high proportion of children with hearing impairments decided to create a more inclusive learning environment. Although some of the children remained in segregated classes, many were mainstreamed for part of the school day. Two kindergarten classes practiced full-time inclusion. Believing the school should be a community of learners, the principal suggested to the school advisory committee that all the children, teachers, and staff members learn manual sign language. The committee, consisting of faculty, family members, and representatives from the community, enthusiastically agreed with the idea. Together, they devised a schoolwide plan of action for accommodating

the children with hearing impairments more extensively. They decided to introduce several new signs every week to all classes. However, the teachers believed that sign language practice in authentic situations was needed.

The committee decided that lunch time in the cafeteria might be a relaxed, authentic context to encourage the use of sign language communication. Traditionally, the children were allowed to converse quietly at their tables. The faculty thought that asking children to converse in sign language with the teachers on cafeteria duty would encourage authentic use of signing. The teachers on duty were always careful to encourage signing, rather than demanding this form of communication. Some children would forget to use sign, or would have to use a combination of oral language and sign to convey their message. Teachers always praised their efforts and did not reprimand children for failing to use sign language. This approach to accommodation yielded wonderful results. The children used sign language more frequently and proficiently with the teachers as the year progressed, and they used sign language more frequently in conversations with their classmates.

ECI programs develop comprehensive, long-term plans for accommodating diverse groups of children. Whether a child has a disability, is gifted, or is in the language-minority, the planning team considers the continuity of experiences across settings, people, and time. Differences in expectations, instructional methods, and environments can influence the success of these children as they encounter transitions from one year to the next and from one program to another (Carta et al., 1990; Sainato & Lyon, 1989). Consequently, all the school staff members involved with the child—including specialists in art, music, physical education, reading, and counseling—must be equipped to provide ongoing support and accommodation. Furthermore, determining the effectiveness of certain strategies and practices may require consistent application of accommodations across time and in various learning contexts.

Recognize Preferences for Teaching Strategies

Individual preferences for certain teaching strategies may affect collaborative planning. A cross-national survey revealed differences in the teaching strategies preferred by preschool teachers, parents, and administrators. The findings of this survey also suggest that not only roles, but also cultural backgrounds, may influence the kinds of strategies preferred by various stakeholders in early childhood programs. Future researchers must determine if such preferences limit the range of strategies teachers are willing to consider, possibly preventing them from making a match with the learning style of individual children (Hoot, Parmar, Hujala-Huttunen, Cao, & Chacon, 1996). Efforts to elicit and truly consider the preferences of all team members, particularly those of families, may improve the chances for the successful implementation of ECI programs. Consensus-building discussions to review available research and consider the possible benefits or disadvantages of each accommodative strategy proposed should precede actual decisions.

Match Teaching Strategies and Accommodations to the Learner

The natural curiosity of young children, as well as their desire for independence, is satisfied when teachers determine their current level of development and seek ways to advance each child's learning (Ferber, 1996; Hanline & Fox, 1993). A focus on children's strengths should guide the process of strategy selection (Allen & Schwartz, 1996; Richarz, 1993; Sapona & Phillips, 1993).

Matching the kind, amount, and intensity of assistance offered to each child during learning activities is critical (Sears et al., 1994). For example, one study found that a high degree of structure and fewer choices helped preschool children with autism to learn more efficiently (Ford, Riggs, Nissenbaum, & LaRaia, 1994). In contrast, school-age children with learning disabilities responded with increased cognitive effort and gained in self-esteem when they were afforded greater choice and individual responsibility (Rose & Rose, 1994). When selecting strategies or accommodations, teachers must consider each child's strengths, skills, prior knowledge, preferences, and learning style. Individual children favor different kinds of sensory input, whether it be auditory, visual, tactile, or kinesthetic (Dunn, Dunn, & Perrin, 1994). Learning experiences must be analyzed to determine possible teaching strategies that can be used. The nature of the task or familiarity of the experience for children are variables that can influence the teacher's choice of strategies (Atwater, Carta, Schwartz, & McConnell, 1994).

When selecting technological accommodations, the characteristics of the child must be matched to the characteristics and features of the technological equipment or devices. Cost, availability, simplicity of use, and adaptability are other important considerations. In addition, preferences of the children and their families may determine the extent of technological accommodations (Parette et al., 1993).

Polloway and Patton (1997) cautioned that no single approach, material, strategy, or technological intervention is likely to secure success for a child with special needs. With this warning in mind, teachers must become knowledgeable and develop proficiency in applying a wide range of strategies and techniques. Knowing what options are available and when each type is applicable will help them effectively enhance the learning of children with special needs.

Research indicates that individual children respond differently to strategies, accommodations, and learning experiences (Biederman, Davey, Ryder, & Franchi, 1994; Cole, Dale, Mills, & Jenkins, 1993; Cole, Mills, Dale, & Jenkins, 1991). It is difficult to identify children's learning styles and match strategies to those styles when children represent a wide range of abilities. Therefore, varying the instructional strategies can increase the chances that, at least periodically, children will experience a close match between teaching strategies and their learning styles and preferences (Grossman & Grossman, 1994).

Intrusiveness. One of the variables to consider when selecting teaching strategies or accommodations is the degree of intrusiveness the strategy imposes upon a child. At one end of the spectrum are naturalistic teaching strategies, in which teachers are encouraged to simply provide a responsive environment or use the least amount of intervention necessary to assist the child. At the opposite end of the

continuum are explicit teaching strategies, which are more directive and, thus, create more of an intrusion. For example, response-contingent instruction, also known as applied behavior analysis, may be needed at times to encourage the engagement of children with disabilities such as severe autism or mental retardation. In some cases, these children require systematic positive reinforcement of desired behaviors to help them gain the skills needed for productive engagement with the learning environment. The degree of intrusiveness used, however, should be carefully considered for individual children. The goal should be to use the least intrusive strategies possible to achieve success (Bailey & McWilliams, 1990; Bailey & Wolery, 1992).

Cultural responsiveness. As mentioned previously, families can have culturally influenced beliefs and preferences regarding the care and education of their children. Their beliefs can determine the degree of effectiveness that they attribute to the strategies employed in their child's early childhood program (Harry, 1992; Hoot et al., 1996). Culture also can influence children's comfort and their degree of participation in learning activities (Au, 1993). Teachers must become familiar with the beliefs and preferences of individual families, establishing effective lines of communication between home and school. Enlightened with this understanding, teachers then can collaborate with families in selecting instructional techniques and interpreting children's responses. With increased cultural sensitivity, teachers can modify learning opportunities to match cultural beliefs and practices. Also, open communication will enable families to gain information about various instructional techniques and their benefits (Peregoy & Boyle, 1993).

Gender differences. By accommodating gender differences in ECI programs, all children have comparable opportunities and each child feels capable. Identifying and implementing strategies that empower girls to take full advantage of their abilities can have a lifelong impact. Children of both genders can learn how to interact more productively in mixed groups. These goals can be accomplished if teachers are knowledgeable about how children develop gender identity and understand stereotypical gender roles.

Such differences vary according to locale, cultural groups, and age. Consequently, accommodating gender differences is a highly individual endeavor. Teachers also should be aware that their treatment of boys and girls can have unpredictable results. If children are allowed to engage in behaviors that are stereotypical for their gender, fewer conflicts might arise. Moreover, teachers may be trying to avoid placing children in a position of conflict with their family values. Another alternative is that rather than accommodating to address gender difference, teachers can treat boys and girls the same. When teachers fail to account for gender differences in behavior, learning styles, and preferences, however, some children may experience serious disadvantages that can affect later educational, social, and economic outcomes. Evidence suggests that girls are more likely than boys to suffer detrimental results when gender-related tendencies are not considered (Grossman & Grossman, 1994).

It is critical to carefully weigh the options for addressing gender differences in light of their possible effects. Once options are chosen, teachers in ECI classrooms conscientiously apply the strategies. While cooperative learning usually enhances girls'

learning, their learning still may be impeded if the activity is not well planned, is ineffectively implemented, or is dominated by the boys in the class. Teachers must vigilantly evaluate the results of strategies designed to accommodate gender differences; careful reevaluation is required if any negative effects are observed (Grossman & Grossman, 1994).

THE TEACHER'S ROLE IN ACCOMMODATING CHILDREN

Teachers play a critical role in selecting and implementing teaching strategies and accommodations. Various factors influence how teachers meet these responsibilities.

Serve As a Mediator

Jean Piaget helped early childhood professionals understand the significance of "active learning," meaning that young learners must act upon the physical environment to create knowledge (Piaget, 1952). Vygotsky (1978) then brought attention to the role of the social environment for stimulating children's learning. Vygotskian theory holds particular importance for ECI teachers. He believed that the interaction of children with one another or with adults is vital for the construction of knowledge. According to Vygotskian-style thinking, teachers facilitate children's acquisition of knowledge through their intervention (Bodrova & Leong, 1996; Mallory & New, 1994; Vygotsky, 1978).

When selecting strategies, teachers must remember to consider the socio-cultural contexts of children's learning, especially when working with children of minorities. Perceptions about socioeconomic status, race, ethnicity, language, and gender can influence pedagogical choices. Teachers in ECI settings strive to avoid the deeply ingrained "deficit reduction" orientation to diversity. Teachers must try strategies, reflect on their success, and creatively adjust their approaches to fit the socio-cultural contexts of their classroom (Bartolome, 1993; Serna & Patton, 1997). A teacher as mediator carefully evaluates all options for facilitating children's learning. Strategies recommended by different fields and disciplines are integrated, as needed.

Practice Interactive Planning

Advance planning, alone, is insufficient for accommodating individual learners in ECI programs. Effective teachers also engage in interactive planning during learning activities with children, monitoring children's progress as they engage in activities so that immediate adaptations can be offered. Interactive planning results in a more responsive learning environment for children (Schumm et al., 1995). Research indicates that even expert teachers could improve their ability to adapt learning activities to better fit individual learners. Monitoring with subsequent accommodations, such as making on-the-spot time adjustments or arranging for peer support, can be instrumental in averting failure for children with special learning needs (Schumm, Vaughn, Gordon, & Rothlein, 1994).

Constant reflection and evaluation of results are critical responsibilities. Lay-Dopyera and Dopyera (1992) urge all early childhood teachers to develop a repertoire of strategies. When selecting and using strategies from their repertoire, teachers move beyond simply knowing that certain strategies were successful for a particular child. Reflective teachers engage in a more conscious evaluation in an effort to determine *why* a particular strategy was successful. Such a reflective process signals progress from an intuitive approach to a more scientific method of teaching (Lay-Dopyera & Dopyera, 1992).

Monitor Children During Learning Experiences

Interactive planning of teaching strategies and accommodations requires vigilant monitoring of children's behaviors, reactions, and performances during learning activities. Teachers remain attentive, alert, and highly sensitive to behavioral signals that learners may exhibit, however subtle. Monitoring is, therefore, an active, constant process. Linguistic diversity among learners also necessitates careful use of monitoring. By asking questions and observing a child's performance, teachers can determine how much a child understands instructions or conversations in the child's second language. Monitoring, with subsequent responsiveness, creates a supportive learning environment that conveys high expectations (Eggen & Kauchak, 1996).

Monitoring strategies are key when children engage in learning center activities. ECI teachers place a priority on their role as facilitators of children's learning, and so they resist the temptation to catch up on mounting paperwork as children play or work independently in centers. Instead, teachers move throughout the room, facilitating children's learning and offering supports or accommodations as needed. By minimizing the number of interruptions from outside sources during learning center times, the teacher can give full attention to monitoring and facilitating children's learning. This goal is easier to achieve when classroom instructional aides or volunteers are oriented to their duties in advance of instructional time, and when all teachers and specialists who integrate their teaching or therapeutic intervention into the classroom coordinate their efforts in advance.

Generate Adaptations

In some cases, children may require custom-made adaptations or modifications. Raschke, Dedrick, Heston, and Farris (1996) describe a case in which four teachers modified a popular board game so that children who had moderate to severe disabilities could play. The teachers observed that their students, ages 5 to 9, did not have the skills needed to play the game of "Candy Land." The teachers played the game themselves to identify all the skills involved. Using a task analytic approach, they devised a list of sequenced subskills and then assessed each child, using the subskills as a checklist. When two weeks of daily, systematic direct teaching of the subskills proved fruitless, the teachers sought other methods. Observing each child, the teachers pinpointed the troublesome aspects of the game. Then the teachers invented creative adaptations to help children develop the needed skills. The adaptations also appeared to increase the power of direct teaching methods; reportedly, some chil-

dren were able to generalize the developed skills to other board games. Therefore, the teachers felt the initial investment of time and effort was highly productive in the long term (Raschke, Dedrick, Heston, & Farris, 1996).

An adaptation may be needed if a child becomes frustrated when using learning materials or is excluded from an activity involving peers. Methods of generating adaptations, such as those described by Raschke et al. (1996), could be used in a variety of early childhood contexts. Ongoing assessment provides valuable information for generating such adaptations. Performance-based assessments can help identify ways the child learns most successfully. For example, if a child learns easily using visual cues, the teacher could concentrate on generating adaptations that provide visual input. Children with typical development also may benefit from temporary adaptations that are designed to increase the salience of some cues, or that reduce the interference of competing stimuli.

Use Effective Teaching Practices

Teachers involved in ECI programs keep abreast of research examining teaching effectiveness. Currently, the inclusive education movement lacks an accumulated body of research to clearly define and validate effective teaching strategies and practices (Fisher, Schumaker, & Deshler, 1995; Wolery, 1991). Many of the accepted strategies and practices used with typical young children, however, are equally effective with children who exhibit atypical development (Harris, Miller, & Mercer, 1995; Safford, 1989). Research indicates that commonalities exist among good teaching practices across various contexts. For example, studies examining variables related to teaching effectiveness indicate that "good teaching" has a high degree of teacher-child interaction, active involvement of children in the learning process, and continual assessment.

In a study involving both general education and special education, experts attempted to identify and validate teaching practices for including children with mild disabilities in general education settings. Ninety-six practices were validated, with over 80 percent identified as necessary for teachers in both general and special education. Therefore, the investigators propose that the extant body of teacher effectiveness research may be a valuable source of information for inclusive programs. By the same token, practices that are effective in special education settings may be effective with typical learners, as well. Still other research studies have noted similarities between children from low socioeconomic levels with low academic performance and children with mild disabilities. Such findings suggest that the body of teaching effectiveness research that was conducted in schools serving children with economic disadvantages may have implications for inclusive programs (Cannon, Idol, & West, 1992).

Understand the Importance of Training

Evidence continues to mount indicating that training is required to ensure effective application of strategies and accommodations. Gaining expertise in planning and implementing a differentiated approach to instruction takes considerable time and

effort on the part of teachers. Winter and Van Reusen (1997) examined the efforts of three experienced teachers (one special education and two kindergarten) over the course of a year as they implemented an inclusive kindergarten program. The kindergarten served a culturally and linguistically diverse group of children, including children with moderate to severe disabilities and middle to low socioeconomic levels. The investigators compared the teaching strategies of the kindergarten team to 73 teacher responsibility statements drawn from two sets of professional guidelines. Collectively, the teachers addressed 58 percent of the practices identified in the guidelines. The teachers, themselves, reported a trial-and-error approach to selecting and using teaching strategies. The investigators suggest that comprehensive training, focusing on recommended strategies and matching these strategies to the unique learning needs of individual children, should be a priority for inclusion programs in early childhood settings (Winter & Van Reusen, 1997).

A study conducted by Schumm, Vaughn, Gordon, and Rothlein (1994) underscores the importance of ongoing training schemes that provide opportunities for teachers to practice new strategies. Teachers implementing inclusion across grade levels found individualized planning and instructional adaptation to be valuable strategies for inclusion. While these teachers perceived themselves as capable of using such strategies, observations revealed that they failed to actually implement strategies and adaptations to accommodate children with special needs. The investigators concluded that teachers need training and practice in order to develop fluency in using unfamiliar skills.

Similarly, a study on the curriculum compacting technique revealed the need for ample training and additional support staff. While teachers learned to use the curriculum compacting procedure adequately, they reported frustration resulting from their lack of expertise in planning enrichment activities to replace eliminated curricular activities. Furthermore, teachers found classroom management difficult when various groups and activities were in progress simultaneously (Reis & Purcell, 1993).

In 1995, the Joint Committee on Teacher Planning for Students with Disabilities reported the successes of four major inclusion research projects. The report emphasizes interactive training. Teachers' expertise was acknowledged, and teachers were given the license to refine the intervention strategies to fit their individual students and classroom situations. Training incorporated a variety of methods, including rehearsal and role-playing. In one project, teachers reconvened after implementing strategies to share reflections, analyze results, and plan revisions (Joint Committee on Teacher Planning for Students with Disabilities, 1995).

Other studies also report benefits to all children when teachers are trained to meet the individual needs of learners within inclusive programs. Sharpe, York, and Knight (1994) report the academic success of children without disabilities in an inclusive education program that provided training for teachers. The teachers learned strategies for individualizing in 2nd- and 3rd-grade classes that included children with moderate to severe disabilities (Sharpe et al., 1994).

Research also highlights the importance of positive teacher affect and feelings of competence as prerequisites to achieving successful inclusion of children with dis-

abilities. A study of preschool teachers found that a relationship appeared to exist between the teachers' feelings of competence and a positive attitude toward inclusion. Moreover, this study suggests that amount of training received, availability of consultative support, and the severity of children's disabilities influence teachers' attitudes. The investigators warn that we must be alert to differences in the personnel and training regimes needed for private sector preschool programs, which often are staffed by non-degreed persons working for meager wages. The availability of training for private sector programs is typically limited. Consultations and training provided by specialists, such as speech and language pathologists, occupational therapists, and physical therapists, may be inaccessible or limited for private sector preschools (Gemmell-Crosby & Hanzlik, 1994).

CONCLUSION

Research provided in this chapter supports the argument that attitudinal commitment toward inclusion is not enough to achieve successful accommodation of all learners. Advance instructional planning, of both curricular content and facilitative strategies, is a critical step toward achieving differentiated learning experiences for young children. The responsibilities for selecting, using, and evaluating teaching strategies and accommodations are influenced by multiple factors. Various methods can be used to improve the planning processes of multidisciplinary planning teams.

REFERENCES

Allen, K. E., & Schwartz, I. S. (1996). *The exceptional child: Inclusion in early childhood education* (3rd ed.). Albany, NY: Delmar.

Altman, R., & Kanagawa, L. (1994). Academic and social engagement of young children with developmental disabilities in integrated and nonintegrated settings. *Education and Training in Mental Retardation and Developmental Disabilities, 29*, 184-193.

American Association of University Women. (1991). *Shortchanging girls, shortchanging America: A call to action.* Washington, DC: Author.

Archambault, F., Westberg, K., Brown, S., Hallmark, B., Emmons, C., & Zhang, W. (1992). *Technical report: Results of the classroom practices survey* (R206R00001). Washington, DC: Office of Educational Research and Improvement. U.S. Department of Education.

Archambault, F. X., Westberg, K. L., Brown, S. W., Hallmark, B. W., Zhang, W., & Emmons, C. L. (1993). Classroom practices used with gifted third and fourth grade students. *Journal for the Education of the Gifted, 16*(2), 103-119.

Arreaga-Mayer, C., Carta, J., & Tapia, Y. (1992). *Ecobehavioral system for the contextual recording of interactional bilingual environments: Training manual.* Kansas City: University of Kansas, Juniper Gardens Children's Project.

Arreaga-Mayer, C., & Perdomo-Rivera, C. (1996). Ecobehavioral analysis of instruction for at-risk minority students. *The Elementary School Journal, 96*(3), 245-258.

Atwater, J. B., Carta, J. J., & Schwartz, I. S. (1989). *Assessment code/checklist for the evaluation of survival skills: ACCESS.* Kansas City, KS: Juniper Gardens Children's Project, Bureau of Child Research, University of Kansas.

Atwater, J., Carta, J., Schwartz, I., & McConnell, S. (1994). Blending developmentally appropriate practice and early childhood special education: Redefining best practice to meet the needs of all children. In B. Mallory & R. New (Eds.), *Diversity and developmentally appropriate practices: Challenges for early childhood education* (pp. 185-201). New York: Teachers College Press.

Au, K. (1993). *Literacy instruction in multicultural settings.* Fort Worth, TX: Harcourt Brace College Publishers.

Au, K. H., & Kawakami, A. J. (1991). Culture and ownership: Schooling of minority students. *Childhood Education, 67*, 280-284.

Bailey, D. B., Harms, T., & Clifford, R. M. (1983). Matching changes in preschool environments to desired changes in child behavior. *Journal of the Division of Early Childhood, 7*, 61-68.

Bailey, D. B., & McWilliams, R. A. (1990). Normalizing early intervention. *Topics in Early Childhood Special Education, 10*(2), 33-47.

Bailey, D. B., & Wolery, M. (1992). *Teaching infants and preschoolers with disabilities* (2nd ed.). New York: Merrill/Macmillan.

Baker, J., & Zigmond, N. (1990). Are regular education classes equipped to accommodate students with learning disabilities? *Exceptional Children, 56*(6), 515-526.

Barclay, K., & Benelli, C. (1994). Are labels determining practice? Programming for preschool gifted children. *Childhood Education, 70*, 133-136.

BEST COPY AVAILABLE

Barone, D. (1994). Myths about "crack babies." *Educational Leadership, 52*(2), 67-68.
Bartolome, L. I. (1993). Effective transitioning strategies: Are we asking the right questions? In J. V. Tinajero & A. F. Ada (Eds.), *The power of two languages: Literacy and biliteracy for Spanish-speaking students* (pp. 209-219). New York: Macmillan/McGraw-Hill School Publishing.
Benner, S. (1992). *Assessing young children with special needs: An ecological perspective.* White Plains, NY: Longman.
Bergen, D. (1993). Authentic performance assessments. *Childhood Education, 70*, 99, 102.
Berk, L. E. (1994). *Child development* (3rd ed.). Needham Heights, MA: Allyn and Bacon.
Biederman, G. B., Davey, V. A., Ryder, C., & Franchi, D. (1994). The negative effects of positive reinforcement in teaching children with developmental delays. *Exceptional Children, 60*(5), 458-465.
Bloom, B. C. (1956). *Taxonomy of educational objectives: Cognitive domain.* New York: David McKay.
Bodrova, E., & Leong, D. (1996). *Tools of the mind: The Vygotskian approach to early childhood education.* Englewood Cliffs, NJ: Merrill/Prentice-Hall.
Boundy, K. B. (1992). *Promoting inclusion for all students with disabilties.* Cambridge, MA: Center for Law and Education.
Bredekamp, S. (Ed.). (1987). *Developmentally appropriate practice in early childhood programs serving children from birth through age 8.* Washington, DC: National Association for the Education of Young Children.
Bredekamp, S., & Copple, C. (Eds.). (1997). *Developmentally appropriate practice in early childhood programs* (Rev. ed.). Washington, DC: National Association for the Education of Young Children.
Bredekamp, S., & Rosegrant, T. (Eds.). (1992). *Reaching potentials: Appropriate curriculum and assessment for young children* (Vol. 1). Washington, DC: National Association for the Education of Young Children.
Bredekamp, S., & Rosegrant, T. (Eds.). (1995). *Reaching potentials: Transforming early childhood curriculum and assessment* (Vol. 2). Washington, DC: National Association for the Education of Young Children.
Bricker, D., & Cripe, J. J. W. (1992). *An activity-based approach to early intervention.* Baltimore: Paul H. Brookes.
Brutsaert, H., & Bracke, P. (1994). Gender context of the elementary school: Sex differences in affective outcomes. *Educational Studies, 20*(1), 3-11.
Butler, J. (1997). Transforming the curriculum: Teaching about women of color. In J. A. Banks & C. A. M. Banks (Eds.), *Multicultural education: Issues and perspectives* (3rd ed., pp. 171-190). Boston: Allyn and Bacon.
Cannon, G. S., Idol, L., & West, J. F. (1992). Educating students with mild handicaps in general classrooms: Essential teaching practices for general and special educators. *Journal of Learning Disabilities, 25*(5), 300-317.
Carta, J. J., Atwater, J. B., Schwartz, I. S., & Miller, P. A. (1990). Applications of ecobehavioral analysis to the study of transitions across early education settings. *Education and Treatment of Children, 13*(4), 298-315.
Carta, J. J., Greenwood, C. R., & Atwater, J. B. (1985). *Ecobehavioral system for the complex assessment of preschool environments: ESCAPE* (ERIC (ED 288 268) (EC 200 587)). Kansas City, KS: Juniper Gardens Children's Project, Bureau of Child Research, University of Kansas.
Cicchelli, T., & Ashby-Davis, C. (1986). *Teaching exceptional children and youth in the regular classroom.* Syracuse, NY: Syracuse University Press.
Cole, K., Dale, P., Mills, P., & Jenkins, J. (1993). Interaction between early intervention curricula and student characteristics. *Exceptional Children, 60*(1), 17-28.
Cole, K., Mills, P., Dale, P., & Jenkins, J. (1991). Effects of preschool integration for children with disabilities. *Exceptional Children, 58*(1), 36-45.
Coleman, L. J. (1994). Portfolio assessment: A key to identifying hidden talents and empowering teachers of young children. *Gifted Child Quarterly, 38*(2), 65-69.
Cook, R., Tessier, A., & Klein, M. D. (1996). *Adapting early childhood curricula for children in inclusive settings* (4th ed.). Englewood Cliffs, NJ: Merrill/Prentice-Hall.
Council of State Directors of Programs for the Gifted. (1987). *The 1987 state of the states gifted and talented education report.* Topeka, KS: Author.
Cox, J., Daniels, N., & Boston, B. (1985). *Educating able learners.* Austin, TX: The University of Texas Press.
Crawford, J. (1991). *Bilingual education: History, politics, theory, and practice* (2nd ed.). Los Angeles: Bilingual Educational Services.
Cummins, J. (1986). Empowering minority students: A framework for intervention. *Harvard Educational Review, 56*(1), 18-36.
Cummins, J. (1989). *Empowering minority students.* Sacramento, CA: California Association for Bilingual Education.
Cummins, J. (1993). Empowerment through biliteracy. In J. V. Tinajero & A. F. Ada (Eds.), *The power of two languages: Literacy and biliteracy for Spanish-speaking students* (pp. 9-25). New York: Macmillan/McGraw-Hill School Publishing Company.
Deiner, P. (1993). *Resources for teaching children with diverse abilities* (2nd ed.). Fort Worth, TX: Harcourt Brace College Publishers.
Derman-Sparks, L., & ABC Task Force. (1989). *Anti-bias curriculum: Tools for empowering young children.* Washington, DC: National Association for the Education of Young Children.
Dunn, R., Dunn, K., & Perrin, J. (1994). *Teaching young children through their individual learning styles: Practical approaches for grades K-2.* Boston, MA. Allyn and Bacon.
Eanes, R. (1997). *Content area literacy: Teaching for today and tomorrow.* Albany, NY: Delmar.
Eggen, P. D., & Kauchak, D. P. (1996). *Strategies for teachers: Teaching content and thinking skills* (3rd ed.). Boston, MA: Allyn and Bacon.
Feldhusen, J. F. (1995). Talent development vs. gifted education. *The Educational Forum, 59*, 346-349.
Ferber, J. (1996). Therapeutic teacher, therapeutic classroom. In L. Koplow (Ed.), *Unsmiling faces: How preschools can heal* (pp. 45-63). New York: Teachers College Press.
Ferguson, D. L., Meyer, G., Jeanchild, L., Juniper, L., & Zingo, J. (1992). Figuring out what to do with the grownups:

BEST COPY AVAILABLE

How teachers make inclusion "work" for students with disabilities. *Journal of the Association for Persons with Severe Handicaps, 17*(4), 218-226.
Fisher, J. B., Schumaker, J. B., & Deshler, D. D. (1995). Searching for validated inclusive practices: A review of the literature. *Focus on Exceptional Children, 28*(4), 1-20.
Ford, L., Riggs, K., Nissenbaum, M., & LaRaia, J. (1994). Facilitating desired behavior in the preschool child with autism: A case study. *Contemporary Education, 65*(3), 148-151.
Fox, L., Hanline, M. F., Vail, C. O., & Galant, K. R. (1994). Developmentally appropriate practice: Applications for young children with disabilities. *Journal of Early Intervention, 18*(3), 243-257.
Fritz, M. F., & Miller, M. (1995). Challenges of the inclusive classroom: Roles and responsibilities. *Contemporary Education, 66*(4), 211-214.
Fuchs, L., Fuchs, D., Hamlett, C., Phillips, N., & Karns, K. (1995). General educators' specialized adaption for students with learning disabilities. *Exceptional Children, 61*(5), 440-459.
Garcia, G. E. (1994). Equity challenges in authentically assessing students from diverse backgrounds. *The Educational Forum, 59*, 64-73.
Gardner, H. (1983). *Frames of mind*. New York: Basic Books.
Gemmell-Crosby, S., & Hanzlik, J. R. (1994). Preschool teachers' perceptions of including children with disabilities. *Education and Training in Mental Retardation and Developmental Disabilities, 29*(4), 279-290.
Gersten, R. (1996). Literacy instruction for language-minority students: The transition years. *The Elementary School Journal, 96*(3), 227-244.
Gonzalez, V., Brusca-Vega, R., & Yawkey, T. (1997). *Assessment and instruction of culturally and linguistically diverse students with or at-risk of learning problems: From research to practice*. Boston: Allyn and Bacon.
Greer v. Rome City School District, 950. F. 2d at 696.
Grossman, H., & Grossman, S. H. (1994). *Gender issues in education*. Boston: Allyn and Bacon.
Hanline, M. F., & Fox, L. (1993). Learning within the context of play: Providing typical early childhood experiences for children with severe disabilities. *The Journal of the Association for Persons with Severe Handicaps, 18*(2), 121-129.
Hanninen, G. E. (1994). *Blending gifted education and school reform* (ERIC Digest #525 ED371520). Reston, VA: Council for Exceptional Children.
Harms, T., & Clifford, R. M. (1980). *Early childhood environmental rating scale*. New York: Teachers College Press.
Harris, C. A., Miller, S. P., & Mercer, C. D. (1995). Teaching initial multiplication skills to students with disabilities in general education classrooms. *Learning Disabilities Research & Practice, 10*(3), 180-195.
Harry, B. (1992). *Cultural diversity, families, and the special education system*. New York: Teachers College Press.
Hewit, J. S., & Whittier, K. (1997). *Teaching methods for today's schools: Collaboration and inclusion*. Boston: Allyn and Bacon.
Hollowood, T., Salisbury, C., Rainforth, B., & Palombaro, M. (1995). Use of instructional time in classrooms serving students with and without severe disabilities. *Exceptional Children, 61*(3), 242-252.
Hoot, J. L., Parmar, R. S., Hujala-Huttunen, E., Cao, Q., & Chacon, A. M. (1996). Cross-national perspectives on developmentally appropriate practices for early childhood programs. *Journal of Research in Childhood Education, 10*(2), 160-169.
Irvin, L., & Walker, H. (1994). Assessing children's social skills using video-based microcomputer technology. *Exceptional Children, 61*(2), 182-196.
Joint Committee on Teacher Planning for Students with Disabilities. (1995). *Planning for academic diversity in America's classrooms: Windows on reality, research, change, and practice*. Lawrence, KS: The University of Kansas Center for Research on Learning.
Jorgensen, C. M. (1994/1995). Essential questions—inclusive answers. *Educational Leadership, 52*(4), 52-55.
Karnes, M. (1990). *Identifying and programming for young black gifted children*. Monroe, NY: Trillium.
Katims, D. S., & Pierce, P. L. (1995). Literacy-rich environments and the transition of young children with special needs. *Topics in Early Childhood Special Education, 15*(2), 219-231.
Katz, L. G., & Chard, S. C. (1989). *Engaging children's minds: The project approach*. Norwood, NJ: Ablex.
Kennedy, D. M. (1995). Plain talk about creating a gifted-friendly classroom. *Roeper Review, 17*(4), 232-234.
KidDesk, software pkg. Edmark Publishers.
Kindsvatter, R., Wilen, W., & Ishler, M. (1996). *Dynamics of effective teaching* (3rd ed.). White Plains, NY: Longman.
Kostelnik, M. J., Stein, L. C., Whiren, A. P., & Soderman, A. K. (1993). *Guiding children's social development*. (2nd ed.). Albany, NY: Delmar.
Kronberg, R., Jackson, L., Sheets, G., & Rogers-Connolly, T. (1995). A toolbox for supporting integrated education. *Teaching Exceptional Children, 27*(4), 54-58.
Lau v. Nichols, 414 U.S. 563, 94S. Ct. 786 (1974).
Lay-Dopyera, M., & Dopyera, J. E. (1992). Strategies for teaching. In C. Seefeldt (Ed.), *The early childhood curriculum: A review of current research* (2nd ed., pp. 16-41). New York: Teachers College Press.
Lesson Plan Designer Plus. (1995). Long Beach, CA: Super School Software.
Lewis, M. (1991, Sept.). *Gender equity: The state of play in early childhood services*. Paper presented at the Early Childhood Convention, Dunedin, New Zealand.
Linn, R., & Gronlund, N. (1995). *Measurement and assessment in teaching* (7th ed.). Englewood Cliffs, NJ: Merrill/ Prentice Hall.
Maker, C., Nielson, A., & Rogers, J. (1994). Giftedness, diversity, and problem-solving. *Teaching Exceptional Children, 27*(1), 4-18.
Mallory, B. L., & New, R. S. (1994). Social constructivist theory and principles of inclusion: Challenges for early childhood special education. *The Journal of Special Education, 28*(3), 322-337.
Mann, J. (1994). Bridging the gender gap: How girls learn. *Streamlined Seminar, 13*(2), 1-5.
Marland, S. (1971). *Education of the gifted and talented* (Vol. 1). Washington, DC: U.S. Government Printing Office.

BEST COPY AVAILABLE

McAfee, O., & Leong, D. J. (1997). *Assessing and guiding young children's development and learning* (2nd ed.). Boston: Allyn and Bacon.
McCormick, L., & Feeney, S. (1995). Modifying and expanding activities for children with disabilities. *Young Children, 50*(4), 10-17.
McCormick, T. M. (1994). *Creating the nonsexist classroom: A multicultural approach.* New York: Teachers College Press.
McIntosh, R., Vaughn, S., Schumm, J., Haager, D., & Lee, O. (1994). Observations of students with learning disabilities in general education classrooms. *Exceptional Children, 60*(3), 249-261.
McLean, M. E., & Odom, S. L. (1993). Practices for young children with and without disabilities: A comparison of DEC and NAEYC identified practices. *Topics in Early Childhood Education, 13*(3), 274-292.
McWilliam, R. A., & Bailey, D. B. (1992). Promoting engagement and mastery. In D. B. Bailey & M. Wolery (Eds.), *Teaching infants and preschoolers with disabilities* (pp. 229-255). New York: Macmillan.
Means, B., & Olson, K. (1994). The link between technology and authentic learning. *Educational Leadership, 51*(6), 15-18.
Miller, R. (1996). *The developmentally appropriate inclusive classroom in early education.* Albany, NY: Delmar.
Mindes, G., Ireton, H., & Mardell-Czudnowski, C. (1996). *Assessing young children.* Albany, NY: Delmar.
Moss, E. (1992). Early interactions and metacognitive development of gifted preschoolers. In P. S. Klein & A. J. Tannenbaum (Eds.), *To be young and gifted* (pp. 278-318). Norwood, NJ: Ablex.
National Coalition of Advocates for Students. (1991). *The good common school: Making the vision work for all children.* Boston: Author.
Parette, H. P., Jr., Hourcade, J. J., & VanBiervliet, A. (1993). Selection of appropriate technology for children with disabilities. *Teaching Exceptional Children, 26*, 18-22.
Penny-Velazquez, M. (1995). Creating gender equitable early childhood environments: A look at what's so —The status of education. *IDRA Newsletter, 22*(4), 5-7.
Peregoy, S. F., & Boyle, O. F. (1993). *Reading, writing, & learning in ESL: A resource book for K-8 teachers.* New York: Longman.
Perrett, R. (1988). *Girls and boys.* Watson, Australia: Australian Early Childhood Association.
Piaget, J. (1952). *The origins of intelligence in children.* New York: International Universities Press.
Pike, K., & Salend, S. J. (1995). Authentic assessment strategies: Alernatives to norm-referenced testing. *Teaching Exceptional Children, 28*, 15-20.
Polloway, E. A., & Patton, J. R. (1997). *Strategies for teaching learners with special needs* (6th ed.). New York: Merrill/ Macmillan.
Purcell, J. H. (1993). The effects of the elimination of gifted and talented programs on participating students and their parents. *Gifted Child Quarterly, 37*(4), 177-187.
Raschke, D. B., Dedrick, C. V. L., Heston, M. L., & Farris, M. (1996). Everyone can play! Adapting the Candy Land board game. *Teaching Exceptional Children, 28*(4), 28-33.
Reis, S. M., & Purcell, J. H. (1993). An analysis of content elimination and strategies used by elementary classroom teachers and the curriculum compacting process. *Journal for the Education of the Gifted, 16*, 147-170.
Reis, S. M., & Renzulli, J. S. (1992). Using curriculum compacting to challenge the above-average. *Educational Leadership, 50*, 51-57.
Renzulli, J. S. (1977). *The enrichment triad model: A guide for developing defensible programs for gifted and talented.* Mansfield Center, CT: Creative Learning Press.
Renzulli, J. S. (1994). New directions for the schoolwide enrichment model. *Gifted Education International, 10*(1), 33-36.
Renzulli, J. S., & Reis, S. M. (1986). The enrichment triad/revolving door model: A schoolwide plan for the development of creative productivity. In J. S. Renzulli (Ed.), *Systems and models for developing programs for the gifted and talented* (pp. 216-266). Mansfield Center, CT: Creative Learning Press.
Richarz, S. (1993). Innovations in early childhood education: Models that support the integration of children of varied developmental levels. In C. Peck, S. Odom, & D. Bricker (Eds.), *Integrating young children with disabilities into community programs: Ecological perspectives on research and implementation* (pp. 83-107). Baltimore: Paul H. Brookes.
Rittenhouse, R. K., & Blough, L. K. (1995). Gifted students with hearing impairments: Suggestions for teachers. *Teaching Exceptional Children, 27*(4), 51-53.
Rose, D., & Rose, C. (1994). Students' adaptations to task environments in resource room and regular class setting. *The Journal of Special Education, 28*(1), 3-26.
Rothstein, L. F. (1990). *Special education law.* White Plains, NY: Longman.
Sadker, M., & Sadker, D. (1994). *Failing at fairness: How America's schools cheat girls.* New York: Charles Scribner's Sons.
Sadker, M., Sadker, D., & Long, L. (1997). Gender and educational equality. In J. A. Banks & C. A. M. Banks (Eds.), *Multicultural education: Issues and perspectives* (3rd ed.). Boston: Allyn and Bacon.
Safford, P. L. (1989). *Integrated teaching in early childhood: Starting in the mainstream.* White Plains, NY: Longman.
Sainato, D. M., & Lyon, S. R. (1989). Promoting successful mainstreaming transitions for handicapped preschool children. *Journal of Early Intervention, 13*(4), 303-314.
Salisbury, C. (1991). Mainstreaming during the early childhood years. *Exceptional Children, 58*(2), 146-155.
Salisbury, C., Mangino, M., Petrigala, M., Rainforth, B., Syryca, S., & Palombaro, M. (1994). Innovative practices: Promoting the instructional inclusion of young children with disabilities in the primary grades. *Journal of Early Intervention, 18*(3), 311-322.
Sapona, R., & Phillips, L. (1993). Classrooms as communities of learners: Sharing responsibility for learning. In A. M. Bauer (Ed.), *Children who challenge the system* (pp. 63-87). Norwood, NJ: Ablex.
Schumm, J., & Vaughn, S. (1991). Making adaptations for mainstreamed students: General classroom teachers' perspectives. *Remedial and Special Education, 12*(4), 15-24.
Schumm, J. S., & Vaughn, S. (1992). Planning for mainstreamed special education students: Perceptions of general classroom teachers. *Exceptionality, 3*, 81-98.
Schumm, J. S., Vaughn, S., Gordon, J., & Rothlein, L. (1994). General education teachers' beliefs, skills, and practices in

BEST COPY AVAILABLE

planning for mainstreamed students with learning disabilities. *Teacher Education and Special Education, 17*(1), 22-34.
Schumm, J. S., Vaughn, S., Haager, D., McDowell, J., Rothlein, L., & Saumell, L. (1995). General education teacher planning: What can students with learning disabilities expect? *Exceptional Children, 61*(4), 335-352.
Schumm, J. S., Vaughn, S., & Harris, J. (1997). Pyramid power for collaborative planning. *Teaching Exceptional Children, 29*(6), 62-66.
Sears, S., Carpenter, C., & Burstein, N. (1994). Meaningful reading instruction for learners with special needs. *The Reading Teacher, 47*(8), 632-638.
Seefeldt, C., & Barbour, N. (1994). *Early childhood education: An introduction* (3rd ed.). New York: Merrill/Macmillan College Publishing.
Serna, L., & Patton, J. R. (1997). Effective teaching practices. In E. A. Polloway & J. R. Patton (Eds.), *Strategies for teaching learners with special needs* (pp. 135-173). Upper Saddle River, NJ: Prentice Hall.
Sharpe, M. N., York, J. L., & Knight, J. (1994). Effects of inclusion on the academic performance of classmates without disabilities: A preliminary study. *Remedial and Special Education, 15*(5), 281-287.
Shavelson, R. J., & Baxter, G. P. (1992). What we've learned about assessing hands-on science. *Educational Leadership, 49*(8), 20-25.
Southern Regional Education Board. (1994). *Getting schools ready for children: The other side of the readiness goal.* Atlanta, GA: Author.
Stainback, W., Stainback, S., & Stefanich, G. (1996). Learning together in inclusive classrooms. *Teaching Exceptional Children, 28*(3), 14-19.
Staub, D., & Peck, C. A. (1994/1995). What are the outcomes for nondisabled students? *Educational Leadership, 52*(4), 36-40.
Sternberg, R. J., & Zhang, L.-f. (1995). What do we mean by giftedness? A pentagonal implicit theory. *Gifted Child Quarterly, 39*(2), 88-94.
Strain, P. S. (1990). Less restrictive environment for preschool children with handicaps: What we know, what we should be doing. *Journal of Early Intervention, 14*(4), 291-296.
Subotnik, R. F. (1997). Teaching gifted students in a multicultural society. In J. A. Banks & C. A. M. Banks (Eds.), *Multicultural education: Issues and perspectives* (3rd ed., pp. 361-382). Boston: Allyn and Bacon.
Teachers of English to Speakers of Other Languages, Inc. (1995a). TESOL standards ensuring access to quality educational experiences for language minority students. *Bilingual Research Journal, 19*(3 & 4), 671-674.
Teachers of English to Speakers of Other Languages, Inc. (1995b). TESOL statement on the role of bilingual education in the education of children in the United States. *Bilingual Research Journal, 19*(3 &4), 661-669.
Tetreault, M. K. T. (1997). Classrooms for diversity rethinking curriculum and pedagogy. In J. A. Banks & C. A. M. Banks (Eds.), *Multicultural education: Issues and perspectives* (3rd ed., pp. 150-170). Boston: Allyn and Bacon.
Turnbull, H. R., III. (1993). *Free appropriate public education: The law and children with disabilities* (4th ed.). Denver, CO: Love Publishing.
Udvari-Solner, A., & Thousand, J. (1995). Promising practices that foster inclusive education. In R. A. Villa & J. S. Thousand (Eds.), *Creating an inclusive school* (pp. 87-109). Alexandria, VA: Association for Supervision and Curriculum Development.
Underwood, J. K., & Mead, J. F. (1995). *Legal aspects of special education and pupil services.* Boston: Allyn and Bacon.
Vygotsky, L. (1978). *Mind in society: The development of higher psychological functions.* Cambridge, MA: Harvard University Press.
Wang, M. C., Haertel, G. D., & Walberg, H. J. (1993/94). What helps students learn? *Educational Leadership, 51*(4), 74-79.
Wesson, C. L., & King, R. P. (1996). Portfolio assessment and special education students. *Teaching Exceptional Children, 28*, 44-48.
Wiggins, G. (1996/97). Practicing what we preach in designing authentic assessments. *Educational Leadership, 54*, 18-25.
Willis, S. (1995). Mainstreaming the gifted. *Education Update, 37*(2), 1-3.
Winter, S. M. (1997). "SMART" planning for inclusion. *Childhood Education, 73*, 212-218.
Winter, S. M., Bell, M., & Dempsey, J. (1994). Creating play environments for children with special needs. *Childhood Education, 71*, 28-32.
Winter, S. M., & Van Reusen, A. K. (1997). Inclusion and kindergartners who are deaf or hard of hearing: Comparing teaching strategies with recommended guidelines. *Journal of Research in Childhood Education, 11*, 114-134.
Wolery, M. (1991). Instruction in early childhood special education: "Seeing through a glass darkly . . . knowing in part." *Exceptional Children, 58*(2), 127-135.
Wolery, M., & Fleming, L. A. (1993). Implementing individualized curricula in integrated settings. In C. Peck, S. Odom, & D. Bricker (Eds.), *Integrating young children with disabilities into community programs: Ecological perspectives on research and implementation* (pp. 109-132). Baltimore: Paul H. Brookes.
Wolf, D. P., LeMahieu, P., & Eresh, J. (1992). Good measure: Assessment as a tool for educational reform. *Educational Leadership, 49*(8), 8-13.
Wortham, S. (1994). *Early childhood curriculum: Developmental bases for learning and teaching.* New York: Macmillan College Publishing.
Wortham, S. C. (1996). *The integrated classroom: The assessment-curriculum link in early childhood education.* Englewood Cliffs, NJ: Merrill.
Wortham, S. C. (1998). *Early childhood curriculum: Developmental bases for learning and teaching* (2nd ed.). New York: Macmillan College Publishing.
Wright, L., & Borland, J. (1993). Using early childhood developmental portfolios in the indentification and education of young, economically disadvantaged, potentially gifted students. *Roeper Review, 15*(4), 205-210.
Zigmond, N., & Baker, J. M. (1996). Full inclusion for students with learning disabilities: Too much of a good thing? *Theory Into Practice, 35*(1), 26-34.
Zigmond, N., & Miller, S. E. (1986). Assessment for instructional planning. *Exceptional Children, 52*, 501-509.

BEST COPY AVAILABLE

CHAPTER 6

Teaching Strategies & Accommodations

KEY QUESTIONS

- *What are naturalistic strategies and how can these strategies be used to facilitate children's learning?*
- *What are the benefits of cooperative learning activities when used with young children?*
- *Why is teaching learning strategies an important focus in the ECI Model?*
- *Why should technology-based strategies be used in ECI programs?*
- *Why is it vital to use a variety of communication-based strategies in ECI programs?*

A REPERTOIRE OF INSTRUCTIONAL STRATEGIES

In this book, the term "instructional strategy" is used to describe a teacher's attempt, either planned or spontaneous, to facilitate the learning of a single child or a group of children. In the field of early childhood special education, the terms "intervention" or "intervention strategies" often have been used to signify such attempts. The instructional strategies and approaches included in this chapter are drawn from a wide span of professional literature and represent varying levels of intensity and intrusiveness. Lacking an accumulated research base that identifies validated practices for inclusive early childhood settings, this author focuses on strategies that have engendered the greatest interest among professionals for addressing the inclusion of young children with diverse characteristics, and explores ways that various approaches, strategies, and practices can be integrated and used to amplify children's strengths and skills.

Research suggests that teachers can do more to enhance the learning of children with different characteristics and abilities by expanding their repertoire of teaching strategies (Baker & Zigmond, 1990; Eanes, 1997; Gersten, 1996; Joint Committee on Teacher Planning for Students with Disabilities, 1995; Leister, 1993; Polloway & Patton, 1997; Schumm & Vaughn, 1991). Furthermore, some children benefit from specialized equipment or modifications to learning materials and environments (Cook, Tessier, & Klein, 1996; Deiner, 1993; Miller, 1996; Polloway & Patton, 1997). Staying abreast of research that examines teaching effectiveness is critical in developing a repertoire of effective strategies for inclusive settings.

Teaching strategies represent a continuum from least to most intrusive. The goal for teachers is to help children acquire skills and reach their goals, while using the least intrusive methods of teaching needed to achieve these purposes (Atwater, Carta, Schwartz, & McConnell, 1994; Bailey & McWilliams, 1990; Bailey & Wolery, 1992). Giving children time to explore the environment freely and encouraging children to participate in play with their peers are two examples of minimally intrusive teaching strategies. At the opposite end of the continuum are teaching strategies or interventions that require greater direction by the teacher and a more rigid performance by the child. For example, a training sequence using behavior modification techniques that requires a child to perform a prescribed set of steps is quite intense and intrusive.

A full palette of strategies allows teachers to create more effective matches between their teaching methods and children's individual strengths and learning styles. Teachers who are well-versed in particular strategies can better gauge the feasibility of using these practices, considering the unique dynamics of the children as a group. Another benefit is that when teachers develop competence in using specific techniques, their self-confidence as teachers increases.

While having a full repertoire of teaching strategies is important, Silberman (1996) warns teachers to try new methods gradually. To avoid confusion when new methods are introduced, children need clear instructions (Silberman, 1996). A sensible approach is to establish a set of basic strategies for routine use, and to accumulate new strategies through training and practice.

The following sections discuss selected types of teaching strategies and accommodations that professional literature suggests are useful in facilitating the learning of children in inclusive early childhood programs. These strategies promote an inclusive "community of learners," while allowing teachers to help individual children achieve their learning goals. They can be used in various combinations; an integrated approach is encouraged in ECI programs. For the purposes of discussion, however, the strategies are grouped into five major categories: 1) naturalistic, 2) sociocontextual, 3) explicit, 4) technology-based, and 5) communication-based.

NATURALISTIC STRATEGIES

Naturalistic teaching strategies and accommodations are implemented within the natural milieu of early childhood contexts. Also known as incidental or milieu teaching, naturalistic strategies enhance learning opportunities that are embedded in or naturally occur during children's play activities and daily routines (Harper-Whalen, Walmsley, & Moore, 1991). In other cases, the use of authentic activities creates naturalistic learning situations. For example, preparing a "trail mix" snack with toddlers presents opportunities for developing cognitive skills such as counting; noticing the different shapes and textures of the cereals, nuts, and fruits; and talking about concepts related to measurement and quantity. Children also gain fine motor skills and practice hand-eye coordination as they eat the small pieces of food.

Naturalistic strategies offer a number of advantages in ECI settings. First, these techniques capitalize on situations that are highly relevant for children, such as playing, eating, dressing, and hygiene. Consequently, children are more likely to be motivated to engage in the learning opportunity. When daily routines are used as a context for learning, opportunities to practice and refine functional skills are plentiful. Second, when teachers embed their strategies in natural, hands-on activities, teaching is consistent with accepted early childhood principles. As Diamond, Hestenes, and O'Connor (1991) note, naturalistic teaching strategies are congruent with programs grounded in the constructivist theory and with those implementing the developmentally appropriate practice model (Bredekamp, 1987; Bredekamp & Copple, 1997). Third, naturalistic teaching strategies lead to minimal intrusion upon the interactions of young children. This advantage may be particularly important to children who are at-risk or to those who have disabilities. Preserving opportunities for natural interactions between these children and their peers in a typical environment is a sign of good teaching in early childhood settings (Bailey & McWilliams, 1990).

To use naturalistic strategies effectively, teachers must be adept at observing children. Information gathered through observation enables teachers to provide activities that are a good match for children. Although children take the lead during play and discovery activities, observant teachers are alert to opportunities to extend children's learning. Methods that provide the child with "scaffolding," as proposed by Vygotsky (Bodrova & Leong, 1996), are ideal for facilitating children's interactions with the physical and social environment.

Teachers in ECI programs who wish to use naturalistic strategies with children who are at-risk or who have disabilities know it is important to become familiar with the goals and objectives pinpointed in each child's Individual Education Program (IEP). Teachers can plan activities that incorporate practice toward these objectives or embed practice within established daily routines. When teachers are knowledgeable regarding each child's IEP goals, they can watch for opportunities to help a child advance toward those goals during activities that the child initiates.

Play-based Strategies

Play is one of the primary vehicles for children's learning during the early childhood years. Consequently, teaching strategies and accommodations that are embedded in play are fundamental for enhancing the learning in ECI programs.

Opportunities for play. Inclusive learning environments that provide opportunities for play are natural contexts for developmental learning. Simply providing the freedom to play may be one of the most important advantages ECI programs offer to children. Children with disabilities often lack opportunities to engage in play situations, for a variety of reasons. One common barrier is the lack of an accommodative play environment. As discussed in Chapter 4, some children with disabilities may need environmental adaptations, both indoors and outside, to accommodate them in play activities (Hughes, 1995; Winter, Bell, & Dempsey, 1994).

Another barrier to the effective use of play is teachers' assumptions that some children do not benefit from play opportunities. For example, children with disabilities may appear to lack play skills, or to need more direction and supervision when playing. While some children may require intervention, others simply need changes in the physical environment to facilitate their engagement. Insufficient environmental accommodations may actually account for many of the differences observed in the play behaviors of children with disabilities (Hughes, 1995). Although inhibition of play behaviors does occur in some cases, providing opportunities for these young children to play is still important. Providing such opportunities can help these children develop skills that increase their inclusion in peer interactions. The goal is to help these children participate in "real play in real play environments" (Bailey & McWilliams, 1990, p. 43).

Children who are emotionally fragile or who have been traumatized may exhibit atypical play behaviors or limited engagement in play. These children also can benefit from open-ended free play opportunities. Play can have a therapeutic effect, especially when a responsive teacher is available to intervene when needed (Koplow, 1996b).

The age of the children served in an ECI programs should not preclude the chance to engage in play. While play behaviors and interests change with age, children need abundant opportunities to play throughout their early childhood years. Wortham (1994) emphasizes that play still serves an important role in the physical, cognitive, and social development of primary grade children. Both structured and free play activities with peers afford opportunities to gain leadership skills, peer acceptance, and feelings of competence. Free play situations also alert teachers to children who are experiencing difficulties in peer interactions (Wortham, 1994).

Cultural diversity. Culture is a significant factor to consider when using play as a teaching strategy. The purpose of play, the kinds of behaviors considered to be playful, and the decisions regarding who is encouraged to participate in play all are influenced by cultural beliefs (Saville-Troike, 1978). Americans tend to focus on play as an interaction with objects in the physical environment. In contrast, the play environments of Japanese and Chinese cultures reflect more emphasis on social interaction. Interaction styles and teacher cues also are linked to culture. For African Americans, learning to focus on personal cues that indicate affect during playful social interactions may be considered a more important accommodation than emphasizing successful interaction with objects in the physical environment (Gonzalez-Mena, 1997). Consequently, teachers' views about play as a teaching strategy may vary, and could conflict with those of families. Therefore, plans for the use of play-based strategies in inclusive settings should consider the influence of culture on goals established for accommodating children during play. Moreover, it is important to be aware of cultural differences when analyzing specific strategies that might be used to facilitate children's interactions with the social and physical aspects of the play environment.

Second language acquisition. Play is a natural context for accommodating young children who are acquiring a second language. The process of language acquisition is enhanced when children have play opportunities that are interactive and that provide experiences that stimulate language production. The relaxed atmosphere of play offers children opportunities to generate meaningful use of language that is intrinsically motivated (Cummins, 1989; Lindfors, 1991); play environments that minimize anxiety and stress for young children may facilitate their comprehension of messages conveyed through the second language.

Stephen Krashen proposed an affective filter concept to explain the relationship of language comprehension to a person's affective state. According to this theory, comprehension of the second language may improve when children are not pressured to learn. Conversely, very intensive learning situations that create high tension levels in children might impede their comprehension. To ensure a rich context for language, teachers in ECI classrooms provide a variety of familiar materials and props for children to use in their play scenarios. One facilitation strategy teachers can use, for example, is to simplify their speech as they play with children, and to consciously use visual or physical cues to reinforce their meaning (Crawford, 1991; Cummins, 1989).

Communication delays and disorders. Context-rich play scenarios are valuable for children with delayed language acquisition, communication disorders, or hearing loss. Play can provide opportunities for these children to practice communicating with others in nonthreatening ways. Playing with puppets, talking on toy telephones, and role-playing with other children encourage communication and can serve as rehearsals for future social encounters. Children with communication disorders can expand their vocabulary as they engage in play activities with their peers. For example, block building play can expand math and science vocabularies. Children who are deaf or hard of hearing gain in visual skills and social competence by

watching their peers during dramatic play activities (Deiner, 1993).

Some children are more responsive to the modeling and indirect language stimulation of peers during dramatic play than to direct language intervention methods used by teachers or therapists. Play stimulates conversations among peers that offer children with communication delays a chance to decipher the language input from other children and to practice conversational skills. Literacy skills also are reinforced when teachers provide materials for reading and writing activities associated with the characters and roles children assume during play (Miller, 1996). For example, cardboard signs, printed menus, and ordering pads can be added to dramatic play centers to encourage print awareness and invented writing as children engage in play that is centered around fast food restaurant themes.

Play interventions. While merely providing opportunities for dramatic play may help some children develop social, cognitive, and language skills, other children may need teacher intervention to increase their success in playing with peers. The behaviors and preferences of individual children should determine the degree of structure a teacher imposes (Bailey & Wolery, 1992). Brown, Althouse, and Anfin (1993) describe a seven-step intervention that was successful in improving the social integration of two children with disabilities in a preschool setting. The children, ages 3 and 4, had cerebral palsy with speech and language delays that hampered their integration into dramatic play. Initially, a teacher worked one-on-one with each child, encouraging them to retell a familiar story by using a flannel board. Over several episodes, the teacher gradually helped each child draw more peers into the activity and changed the activity so that the children, themselves, assumed roles. The intent was to move toward a closer approximation of spontaneous dramatic play scenarios so that the learned skills would generalize to naturally occurring free play situations. Technology helped develop language and cognitive skills related to the play. The teacher took photographs of the play episodes, and used them during one-on-one sessions to encourage talk about the play activities and reinforce the story sequence. Staff members reported that the cooperative social skills and communication abilities needed for initiating and maintaining play with peers improved in both children. The authors do note, however, that the impaired mobility of one child may have interfered with her integration into play. She often entered peer groups after play had begun, although she learned to initiate roles for herself. When lack of mobility hampers children's intitiation into play groups with their peers, ways to expedite their entry can be devised. While lack of clinical data to support the observations limits the generalizability of these findings, the implications for further research are clear. Play interventions of this type could prove valuable in advancing play and cooperation among children with disabilities and their peers (Brown, Althouse, & Anfin, 1993).

A mild, unobtrusive play intervention is to embed opportunities for children with disabilities to practice specific skills while playing with activities and materials that are available to all the children. This strategy accommodates children who need extra practice with particular activities and materials to foster acquisition or refinement of specific social, cognitive, language, or motor skills (Isenberg & Jalongo,

1993). Embedding these opportunities for skill practice within play activities that are accessible to all children makes the accommodations for individual children less obvious. For instance, children with delayed language development can practice communication skills using puppets, props for role play, and games that prompt conversations. Encouraging children to manipulate play dough, art materials, and pegboards (all common features of an early childhood setting) can refine a child's fine motor skills.

Embedding specific skill practice into play creates many opportunities for children with disabilities to benefit from informal modeling or tutoring by their peers. Teachers can maximize these opportunities by encouraging children to participate, and by supporting peer-mediated learning that may naturally occur. Moreover, when teachers engage in play activities with children, they can demonstrate various ways to practice the specific skills embedded in the activity. Strategies such as asking questions or offering suggestions can help children gain skills as they play (Bricker & Cripe, 1992).

Play therapy. Koplow (1996) believes that play therapy is important for children with emotional or psychological special needs. Play therapy, the integration of psychological therapy techniques into play, can help children who have elective muteness, social withdrawal, fearfulness, disorientation to reality, or other psychological symptoms. In such cases, a social worker, psychologist, or teacher trained in play therapy techniques can conduct the therapy one-on-one in a specially equipped therapy room. When the child returns to his preschool room, the classroom teacher can use therapeutic techniques as occasions arise during routines and activities. For example, teachers can learn to use reflective verbal techniques that help clarify situations, thoughts, and feelings. The teacher might repeat what the child has said or focus on certain aspects of what the child verbalized. In some situations, the teacher might offer the child a possible interpretation of a situation or of the child's feelings. Such interpretive techniques can help children gain insights when anxiety makes it difficult for them to analyze the situation or articulate their own feelings. As a step toward devising a solution, interpretive techniques can help a child learn to assess the problem that has arisen (Koplow, 1996a).

Facilitating play. Research verifies the influential role adults can exert on children's play. A substantial research base supports adults' deliberate attempts to improve the quality or incidence of children's play behaviors. It is critical, however, to acknowledge the child's lead and select the least intrusive intervention methods possible (Dempsey & Frost, 1993).

Evidence suggests that the ways teachers interact with children during play situations affect children's behavior and, ultimately, their development. Koplow (1996b) notes that preschool children who are arrested in their development or who have experienced significant trauma may be unable to engage productively in play activities. Koplow believes that simply providing materials and time for free play may be insufficient for these children, who may exhibit adverse reactions such as withdrawal, destructiveness, perseveration, or lack of focus. If such reactions occur, Koplow recommends teachers take a more active role in initiating and facilitating play episodes. She also recommends

reducing the adult-child ratios in the classroom to increase the availability of teachers to children during play (Koplow, 1996a). Ferber (1996) echoes this view of a teacher's role during play. She envisions a teacher's role as one that supplies an "invisible structure" to help children organize and elaborate on their play activities (Ferber, 1996).

O'Brien and Bi (1995) examined the effects of adult interaction during play on the language development of toddlers enrolled in an early intervention program. They compared the language of teachers and toddlers interacting in two different play contexts—a house/doll play scenario and a block/truck play scenario. These researchers found that each of the play contexts elicited different types and amounts of language input by teachers, as well as different responses by the toddlers. Teachers offered high verbal input with many questions and comments, using a wide variety of vocabulary, during interactions in the house/doll play activities. Toddlers responded by speaking infrequently—generally using one-word utterances. In the block/truck play scenario, teachers exhibited a moderate verbal input, asking fewer questions, and using more descriptions of the occurring activities. This facilitation style elicited greater amounts of oral expression and more complex language among the toddlers. The researchers concluded that the language opportunities of these toddlers were enhanced more when teachers described events rather than asking questions.

Children engaged in play benefit when teachers use a variety of strategies to respond to each child's individual abilities. Teachers can assume a supportive role, enhancing children's play through modeling, encouraging participation, and providing sources for new play theme ideas. Classroom visitors, field trips, reading sessions, or other group activities all provide a fund of shared experiences for enriching dramatic play.

Including children with severe disabilities in play may require a teacher to move from an ancillary role to a more active one that involves a greater degree of direct involvement. Adaptive equipment may be needed to help the children experience play activities that are similar to those of their peers. It is important to watch for children's subtle cues during play. For instance, children may use eye contact or direct their gaze to indicate a preference for certain play items. Although some children may benefit from increased teacher intervention, it is critical to encourage independence, promote choice, and provide opportunities for children with severe disabilities, in order to initiate social interaction with their nondisabled peers (Hanline & Fox, 1993).

Activity-Based Intervention

Some young children, especially those with severe disabilities, may require more intense or specific intervention methods to acquire skills and to participate in activities with their peers. Using naturalistic strategies in combination with other methods can allow these children to be successfully included in ECI settings. Bricker and Cripe (1992) developed an approach to early intervention for infants to preschoolers who are at-risk, delayed, or have identified disabilities. While the Activity-Based Intervention (ABI) approach originally was developed for early intervention programs, Bricker and Cripe (1992) contend that these strategies are compatible with such naturalistic approaches as developmentally appropriate practice (Bredekamp, 1987; Bredekamp

& Copple, 1997). Therefore, with training, ABI can be used in inclusive child care and preschool settings.

ABI combines behavior analysis methods with elements from the developmental theories of Piaget and Vygotsky. Consequently, this approach allows teachers to pursue specifically identified goals for individuals, while the children participate in functional routines and enjoyable, appropriate activities with their peers. The teacher plans these activities, gathering the materials and offering the activity in the classroom. Participation, however, is initiated by the child. An advantage of using natural activities is that logical antecedents usually are present, and participation results in logical consequences. In contrast to training approaches that provide fragmented experiences, children benefit from ABI's opportunities to learn through holistic experiences that occur in relevant contexts. ABI strategies can be embedded into authentic activities and into those that are valued in culturally diverse communities. The approach also affords the possibility of using unobtrusive observational and performance-based assessments (Bricker & Cripe, 1992).

When ABI approaches are used with children who have moderate to severe disabilities, teachers may employ a variety of strategies to enhance their participation and learning during usual routines and activities. By involving these children in setting up or cleaning up, teachers can provide extended time for the children to become familiar with the concrete materials related to the activity. Teachers also might introduce activities in ways that increase participation. For example, showing photographs or reading a story related to new theme-related props could give children ideas for role-playing activities. Some children may need added novelty, increased opportunities for repetition, or problems to solve. A chance to recap an activity provides some children with practice in communication skills and may lead to a better understanding of the activity for others (Bricker & Cripe, 1992).

Jenny

On the day of one child's birthday, the teachers place cake pans and kitchen utensils in the sandbox. Just before taking the children outside, one teacher reads a story that describes the sequence of making a birthday cake. Two-and-a-half-year-old Jenny and several of her peers find the new cake-related materials in the sandbox and decide to make a birthday cake. The children practice fine motor skills as they repetitively scoop sand into a cake pan and pat it down. Knowing that Jenny needs practice in language and cognitive skills, the teacher asks the children what they plan to use for candles. The teacher picks up a plastic shovel and asks if they would like to use it for a candle. The children laugh. She asks, "Why not?" and they tell her it is too big. She suggests several other items, including a ball and a piece of string, encouraging the children to explain why the items are implausible. The children discuss other options and decide to use twigs. Later, the teacher invites Jenny and a friend to draw their sandbox cake as they discuss the experience.

In this case, a child's birthday was a logical antecedent of the sand play activity. The story presented the sequence of making a birthday cake and

ideas for imitative role-playing. When the teacher introduced a problem, the value of the activity increased for all the children; in addition, several of Jenny's IEP objectives were addressed, and she gained an opportunity to practice communication and problem-solving skills. The teacher increased the opportunities for children to talk and use logical thinking by suggesting improbable solutions to the problem. The children felt pride at solving the problem and completing the cake.

SOCIOCONTEXTUAL STRATEGIES

Having studied children with disabilities in general education classrooms, McIntosh, Vaughn, Schumm, Haager, and Lee (1994) recommended avoiding approaches that require whole-class instruction, instead advocating small-group instructional contexts. When children are divided into small groups for learning activities, they tend to be more actively engaged and teachers can offer individual assistance more easily (McIntosh, Vaughn, Schumm, Haager, & Lee, 1994). Environments that encourage children to learn in small, heterogeneous groups can help maximize opportunities for social, cognitive, and language development.

Small, heterogeneous groups are compatible with the concept that children in inclusive settings constitute a community of learners (Au & Kawakami, 1991; National Coalition of Advocates for Students, 1994). Engaging children who are diverse in collaborative, small-group interactions can help them acquire knowledge, build cognitive abilities, and exercise language and literacy development. Diverse cultural perspectives and viewpoints can enrich the learning of all children (Peregoy & Boyle, 1993).

Cooperative Learning

Cooperative learning is an organizational strategy that involves the collaborative effort of a heterogeneous, small group of children to successfully complete a task. The teacher either randomly assigns children to groups or carefully plans membership to ensure balance. Procedures encourage the individual responsibility of each learner and the cooperative effort of all group members. Assigned procedural roles can be rotated to broaden children's social experiences (Peregoy & Boyle, 1993). Cooperative learning places children from different backgrounds in a shared context for learning. In diverse societies, this organizational strategy provides children with a means of discussing, interacting, and problem-solving to accomplish a task. Therefore, cooperative learning is a valuable strategy for the literacy development of children in diverse societies (Meloth, 1991).

One of the most compelling reasons to use this strategy is the prodigious body of research that indicates its efficacy as an instructional strategy with diverse groups of children at various age spans. Opportunities for cognitive gains through engagement in cooperative learning are clear. Vygotsky recognized that through collaboration, children can help advance other children's learning. The more capable peers in the group may be operating within other children's zone of proximal development. Consequently, the more capable peers serve as models, helping to advance the cogni-

tive skills of children operating at less advanced levels (Vygotsky, 1978). Considerable research lends support to Vygotsky's contention and reveals other cognitive advantages. Low-achieving children seem to gain particular benefits from engaging in cooperative learning tasks while grouped heterogeneously (Veenman, 1995). It appears that the process of explaining, often a part of peer tutoring, effectively causes cognitive restructuring or elaboration, so that the tutor retains new information. Collaborative talk that occurs during cooperative learning activities also appears to advance children's literate thinking. The features and attributes of conversational language become apparent to children when they are using their spoken language for collaborative purposes (Wells & Chang-Wells, 1988).

In addition to cognitive effects, children in cooperative groups appear to spend more time on task, gain self-esteem, and develop more independence in learning (Slavin, 1995). Prosocial skills, such as supporting the achievement of their peers, complement the development of higher-order thinking (Veenman, 1995). The most positive results appear to occur when the individual learning of each group member is required for the entire group to receive a reward. Using other instructional strategies in tandem with cooperative learning strategies appears to increase the effectiveness of cooperative learning groups. For example, teaching learning strategies related to the content of the cooperative learning activity can improve children's performance. Directly teaching children strategies for working together, such as peer tutoring, mutual assessment, or peer modeling, seems to positively affect the outcome of cooperative learning (Slavin, 1995).

Initiating Cooperative Learning

Ms. Moretti wanted to find out what kinds of cooperative learning strategies might work best for her students. She observed children during their free play interactions in learning centers and recorded information about their ability to work independently and collaboratively. Using her observational data, she assigned children to various types of cooperative learning situations and recorded information about their reactions. First-graders collected rocks and pebbles on the playground. She arranged children into small groups and allowed some children to work individually. Ms. Moretti then asked some of the 1st-graders to graph pebbles according to their attributes using Graph Club, a computer software program. She assigned leaders, asked one child to be the pebble sorter, and asked another to use the computer. Ms. Moretti observed how the children accomplished this task and used the data to create other cooperative learning activities.

Cooperative learning groups can be organized so that each child contributes an area of strength to the group effort. Sometimes the children, themselves, become aware of individual strengths of other group members, and so they spontaneously initiate adaptations. Therefore, cooperative learning allows children with disabilities more social equity with their peers (Slavin, 1995).

While cooperative learning can begin very early, teachers should not assume that young children have all the skills needed for successful cooperative learning activi-

ties. Teacher intervention can help children learn the social skills that will enhance their participation (Gross & Ortiz, 1994). Initially, teachers can encourage pairs of young children to engage in simple play activities with delineated roles. In the sandbox, one child can hide toys in the sand for a partner, who digs to find the buried treasures. Pairs can blow and pop bubbles or fill and dump containers, trading roles after a time. Teachers should provide play materials that lend themselves to cooperative activities, such as puzzles with the pieces divided, play dough with cutters, and beads to string with the aid of pattern cards. Badges, pocket charts, or other visual aids may help children remember their roles. As children gain proficiency working in pairs, teachers can encourage expanding the group to three participants. With increasing age and social proficiency, cooperative groups can include more members and undertake more complex projects in creative dramatics, reading, writing, art, construction, and other areas (Fad, Ross, & Boston, 1995).

In the field of multicultural education, cooperative learning is suggested as a means of fostering intergroup relationships, thus preparing children to work effectively with culturally and racially diverse groups of people (Grant, 1995; Solomon, 1995). Abandoning competitive classroom activities in favor of prosocial techniques, such as cooperative learning, has a positive impact on racial equity. By assigning children to multiethnic groups, the teacher promotes an anti-bias perspective. Research indicates that intergroup relations among children benefit from daily interpersonal contact (Slavin, 1995). Moreover, when literacy activities involve locally relevant anti-bias themes or multicultural literature, children develop the critical literacy skills needed to resist bias (Poplin, 1993).

Second language learners and culturally diverse groups of children also benefit from cooperative learning strategies (Calderon, 1996; Schauber, Morissette, & Langlois, 1995). According to constructivist theory, knowledge is constructed both individually and through social interaction. Culturally different perspectives make the knowledge constructed by various groups or communities somewhat unique (Poplin, 1993). Furthermore, cultures differ in the value attached to knowledge derived from the individual or group processes. Some families may believe that the teacher is the sole source of learning in the classroom. A great number of ethnic minorities, however, strongly favor group cooperation. Cooperative learning builds upon children's home experiences and expands their ability to interact with others (Peregoy & Boyle, 1993; Poplin, 1993).

Cooperative learning, combined with a whole language approach, is a highly effective strategy for developing children's bilingualism and biliteracy. The natural, nonthreatening interactions that occur during cooperative literacy activities facilitate second language acquisition and closely resemble the acquisition process of the primary language (Calderon, 1996; Poplin, 1993). In early childhood settings, children can explore highly motivating topics of thematic, interdisciplinary units during cooperative learning activities. When concrete experiences related to these units are embedded in cooperative learning, each child's comprehension of his or her second language increases.

Research on gender equity suggests that cooperative learning may enhance the participation and learning of girls in mixed groups. Findings reveal that girls learn

and solve problems better through collaboration, rather than competition. Team participation in relevant, hands-on learning activities appears to boost the performance of girls in school. Girls appear to derive a sense of confidence when they establish close relationships with other girls in their school settings (Mann, 1994). Accommodating individual children, however, should override the inclination to select instructional strategies based solely on gender. Teachers cannot assume that tendencies and preferences associated with gender are present in every case. As explained more fully in Chapter 2, many variables can influence children's behavioral characteristics.

Teachers must carefully observe to evaluate the effectiveness of cooperative learning strategies with regard to gender differences. Preparing both girls and boys to assume group leadership responsibilities is important. This step will increase the sensitivity of children to role dynamics. Children, especially boys (who have a tendency to dominate group activities), can learn collaborative behaviors that benefit the efforts of the group as a whole (Grossman & Grossman, 1994). Rotating roles so that boys and girls take turns as leaders and followers will help keep participation balanced. Teachers must vigilantly monitor group interactions, however, to ensure that behavior is consistent with assigned roles. Encouragement from the teacher can help all children learn to assume both the dominant and subordinate roles needed for collaborative tasks (Sadker & Sadker, 1994).

Cooperative learning also is recommended when groups of young children are diverse in terms of chronological age. The popularity of multi-age or nongraded programs is increasing in the United States. ECI programs that serve children with disabilities can represent multiple ages. Internationally, numerous European countries, as well as Canada, China, Australia, Malaysia, and many other countries, report significant percentages of schools using multi-age arrangements (Veenman, 1995).

Peer Mediation Strategies

A clear advantage ECI settings offer to young children with disabilities is plentiful chances to learn from the modeling of typically developing peers. Research indicates that young children with severe disabilities benefit from peer modeling (Hanline & Fox, 1993). Proximity alone, however, may be insufficient to produce these benefits. Often, teacher facilitation is necessary to ensure the success of peer modeling opportunities. A teacher can help initiate a peer modeling situation by inviting a peer to join in an activity with a child who has a disability. When a peer modeling opportunity naturally occurs, a teacher can compliment the child who is modeling appropriate behaviors and encourage the child with disabilities to observe or imitate. Teachers can facilitate peer modeling most effectively by prompting both children with disabilities and those without (Cavallaro, Haney, & Cabello, 1993; Hanline, 1985).

Winter et al. (1994) suggest that peer modeling may serve as a strategy for teaching and reinforcing safety-related behaviors to young children with disabilities. These authors propose that teachers use peer mediation strategies to facilitate opportunities for peer modeling of safety behaviors, relevant to indoor and outdoor play environments (Winter et al., 1994).

EXPLICIT STRATEGIES

Questions have been raised about the effectiveness of using solely naturalistic teaching strategies when children with severe disabilities are enrolled in a program. Lack of participation by children with severe disabilities (Carta, Schwartz, Atwater, & McConnell, 1991) may limit the effectiveness of such naturalistic teaching strategies. While Drinkwater and Demchak (1995) recognize that more assistance and intervention may be needed for preschoolers with disabilities, they urge practitioners to use only those prompts that are the most natural and least intrusive.

Prompts and Cues

Prompts are stimuli offered during learning activities before a child responds. The purpose of a prompt is to cue the learner to the correct response or way of performing. Prompts can add information that will highlight salient stimuli or increase a child's chances for success. Behaviorist in nature, prompts can be used successfully in holistic learning situations to help children interact more fully (Cavallaro et al., 1993; Polloway & Patton, 1997).

Physical prompts. Mrs. Baker could use a physical prompt to help Amanda, a 4-year-old with cerebral palsy, use a puppet more effectively. By placing her hand inside a puppet with Amanda's hand, Mrs. Baker can physically assist Amanda in moving her hand in a way that makes the puppet's mouth move. Learning this skill may allow Amanda to engage more fully in puppet theater play with her nondisabled friends. Participating in this activity increases Amanda's chances to observe peer models, interact socially, and develop expressive language skills.

Verbal prompts. Word cues or voice inflections are verbal prompts that can help some children learn more efficiently. Such prompts are especially important for children with visual impairments. Through the use of verbal strategies, preschoolers with visual impairments can gain information about the play environment and about acceptable behaviors expected during play (Crocker & Orr, 1996). Mr. Hill can cue Danny, a 7-year-old child with limited vision, during a math game with manipulatives. "Now count," he says to Danny, cueing him to use counting to gain his answer. Ms. Barrera uses verbal prompts to help Juan, age 8, acquire vocabulary in English to match concepts he has developed using Spanish. Pointing to the steam rising from a pan of hot water during a science experiment, she says, "En espanol es muy caliente. In English it is _____?"

Visual prompts. Pictures and printed words can convey concepts and information, and help children learn organizational skills. A sign that reads "Wash your hands," placed above the sink in a bathroom, can help remind children to develop good hygiene habits. For nonreaders, a picture of sudsy hands could convey the same message. Visual prompts are especially important for children with hearing impairments. Miss Grossman was using speech and sign language to help 5-year-old Aaron understand how to make an "A, BB, A" pattern while stringing colored beads. She then drew a picture of the pattern on a card and showed Aaron how to replicate it with beads. She drew another pattern and Aaron easily re-created that as well.

Soon, Aaron was creating his own patterns and identifying patterns other children at the table were making. For children with low vision, enlarging print in the classroom or darkening the outline of figures in pictures may help them gain information through visual prompts (Deiner, 1993).

Gestural prompts. As Aaron acquires sign language, an interpreter is present to assist him during story time. His teacher, Ms. Smith, uses gestural prompts to cue Aaron to watch the sign language interpreter because Aaron is easily distracted by visual stimuli in the room and the movements of other children. Ms. Smith waves her hand in front of Aaron to gain his attention and then points toward the interpreter.

Corrective Feedback

Offering immediate feedback after the performance of a task serves to reinforce desired responses and motivate the learner. When teachers nonthreateningly offer feedback that is corrective, the feedback becomes even more valuable (Polloway & Patton, 1993). Effective feedback is immediate and offers specific information that is directly related to a child's performance on a task. When feedback is offered, the emotional atmosphere established by the teacher's tone of voice and demeanor must be positive to ensure that the child feels secure within the learning environment (Eggen & Kauchak, 1996).

Angela

Three-year-old Angela dips her brush from one color of paint to another as she paints at the easel. Splish! Splosh! Colors swirl together in each paint pot. With a smile, Mrs. Wood quietly suggests, "Angela, if you swish your brush in the cup of water like this (she physically prompts her by placing her hand over Angela's to guide her through the motion of the task), your colors will not get mixed up."

Graphic Organizers

For children with cognitive delays or hearing impairments, visual information presented in an organized manner may assist concept attainment and encourage involvement in learning activities. Various types of graphic organizers can be used to preface an activity, to organize information as it is accumulated throughout the activity, or to reflect on what has been learned. Gross and Ortiz (1994) suggest using a story web to enhance the learning of children with disabilities. Initially, the web introduces categories that can serve as an outline to guide children's listening for meaning as a story is read. Teachers can activate children's prior knowledge by encouraging them to discuss what they already know about the story's theme. As the teacher reads, pertinent information can be added to the web to aid follow-up discussion. After the story, the web can encourage children to practice their language skills as they retell the story to one another (Gross & Ortiz, 1994).

Thinking About Pumpkins . . .

Ms. Ellison drew a large pumpkin on some chart paper, using an orange marker. She asked the children what her drawing represented. "A pumpkin!" they chimed

in unison. "That's correct," she said. "Now let's think. . . . What do you know about pumpkins?," she asked. As the children responded, the graphic organizer grew to reflect their collective prior knowledge. The children thought of locations where pumpkins could be found, such as pumpkin patches, grandma's house, or porch steps. They used their vocabulary to discuss colors, sizes, and shapes. Ms. Ellison asked them to list ways pumpkins could be used. The chart paper was attached to a bulletin board. As children learned more about pumpkins, new information was added to the graphic.

Individualized Reinforcement

Because children with disabilities, especially those with severe developmental delays, often are reluctant to participate in learning activities, strategies to increase their involvement can be critical to their successful inclusion. Systematic use of sensory reinforcers can increase their participation in instructional activities. While Mason and Egel (1995) describe a highly structured method of identifying and using reinforcers, these techniques could be adapted to meet the less structured environment of an inclusive early childhood program. Teachers can identify preferred reinforcers by observing children's sensory preferences during free play. Mason and Egel (1995) devised objects, activities, or social reinforcers, and divided the possible reinforcers into eight sensory categories: 1) visual, 2) thermal, 3) social, 4) tactile, 5) olfactory, 6) gustatory, 7) auditory, and 8) vestibular. A brief mini-reinforcer assessment, requiring less than five minutes per child, identified the children's preferences among the reinforcers. Once identified, preferred reinforcers were placed in boxes labeled with the children's names. Consistent with behaviorist principles of learning, these reinforcers were used systematically, changed frequently, and offered only for a brief amount of time (Mason & Egel, 1995). This technique is compatible with the goals of inclusion in two ways. First, the identification of preferred reinforcers recognizes the uniqueness of individual children. Second, by applying basic principles of behaviorist learning theory, teachers may help children who fail to participate on their own to take fuller advantage of an inclusive program.

Teaching Learning Strategies

All children devise strategies for learning as they gain in metacognitive skill. As they play and interact with young children, parents and teachers serve as models for creating and using learning strategies. Gifted preschoolers rapidly learn strategies from casual play with their parents (Moss, 1992). Children with learning disabilities or low achievement typically evidence difficulty in devising strategies for gaining usable information from stimuli and experiences. They may have difficulty deciphering rules for situations or designing a plan for solving problems. Rather than concentrating on the remediation of such cognitive weaknesses, researchers have tried various interventions to circumvent deficits and focus on abilities to use for learning. The process of teaching a young child to become a strategic learner, however, must not become isolated sessions of drill-and-practice. Learning strategies should be taught in ways that are appropriate for the age and development of the child, using

concrete materials and hands-on experiences. In a developmentally appropriate context, explicit teaching of strategic learning techniques can be very effective. The learning strategies should capitalize on children's strengths, increasing their ability to gain benefits from more authentic learning experiences.

It is apparent that a decidedly Vygotskian approach underlies the notion of teaching learning strategies (Pressley, Brown, Ell-Dinary, & Afflerbach, 1995). Vygotsky believed that children gradually develop cognitive "tools," or strategies, that enhanced their ability to learn. He recognized that teachers could influence children's learning by teaching them to use more efficient strategies. Vygotsky believed that teachers should equip children with efficient tools for acquiring knowledge, help children gain independence in using those tools, and support them as they creatively develop their own strategies. This independent, strategic approach to learning, Vygotsky thought, was necessary for the development of more advanced logical thinking and problem solving (Bodrova & Leong, 1996).

Boom and Fine (1995) describe efforts to help a kindergartner who had difficulty writing numerals. When traditional methods had failed, a tutor engaged him in a variety of age-appropriate, hands-on activities, such as tracing, writing in sand, and using play dough to form numerals. Still, the child was unable to produce written numerals. The tutor noted, however, that the child was able to recite TV jingles and nursery rhymes quite easily. Attempting to capitalize on the child's strength—a good memory—the researcher devised a series of metacognitive learning strategies, teaching the child a short saying corresponding to the handwriting strokes required to produce each numeral. A simple acronym reminded the kindergartner to use a set of metacognitive strategies when faced with a task involving numeral writing (pictures could be used to help nonreaders remember the thinking strategies).

Through a scheme of teacher modeling and systematic practice, the child memorized the strategies and learned to apply them. Once the child became proficient in using the learning strategies, he could produce numerals in controlled circumstances. Training then focused on generalizing the child's use of strategic learning to a variety of authentic numeral writing situations, both inside and outside the classroom. He wrote numerals for shopping lists, event plans, or records for science experiments. The final step, attribution training, involved guided discussions to help the child understand that progress was due to his own effort.

The case described by Boom and Fine (1995) is a good example of appropriate use of teaching strategic learning in an early childhood setting. The result for the kindergartner was greater independence and self-confidence in learning. These newly developed skills allowed the child to participate more fully in activities with his peers, thus creating a more normalized learning environment for him. Improving efficiency in learning can have a positive effect on a child's acquisition of knowledge in the long term.

Teachers must receive training and spend time planning in order to effectively create and teach learning strategies. When the skills developed using the learning strategy are highly generalizable to a variety of contexts, it is time well spent. Marks, Laeys, Bender, and Scott (1996) offer evidence that teachers can be highly successful

in creating effective metacognitive learning strategies. These authors propose a set of steps to guide teachers through the process of developing learning strategies. First, the teacher should decide the type of task the strategy will target. The task should be short, 15 to 20 minutes, with observable performance outcomes. Second, a brief, sequential set of steps for accomplishing the task must be developed. The number of steps should be matched to the developmental level of the child. Third, a concise statement describing the step must be written. Each statement must be brief, to facilitate memorization. Fourth, the strategy should apply to particular tasks, allowing children to discriminate when to use the strategy. Fifth, a mnemonic can assist children in memorizing the steps. Either acronyms or pictures can be used, depending on the age of the child. Following a period of teaching the strategy to children, data must be collected to determine its effectiveness.

Marks et al. (1996) reported amazing increases in elementary students' ability to interpret pictorial information in social studies following learning strategy instruction. Similarly, large improvements in math quiz scores occurred following instruction with an acronym that cued students to use a set of test-taking strategies. The authors concluded that the teachers had devised successful learning strategies, using the five-step guide they suggested (Marks, Laeys, Bender, & Scott, 1996).

Pressley, Brown, El-Dinary, and Afflerbach (1995) summarized research findings regarding the use of cognitive strategies to improve children's reading comprehension. Substantial evidence suggested that teaching cognitive strategies that are matched to the task can increase comprehension in children with and without learning disabilities. These authors believe that strategies training is a long-term, high-intensity intervention that helps a poor reader learn to use those strategies often undertaken by excellent readers. Apparently, good readers develop and flexibly use a repertoire of various strategies to gain meaning via clues they encounter as they read. Readers become more "constructively responsive," or able to construct meaning from text more proficiently, with both ongoing strategies instruction and opportunities to use the techniques. Transactional strategies instruction refers to teachers' efforts to help children become strategic learners. The high degree of success reported in the research summarized by Pressley et al. (1995) is encouraging. These findings strongly imply that teachers should consider transactional strategies instruction a viable method in inclusive classrooms at the primary level and above. As these authors remind readers, strategies instruction designed to increase reading comprehension also influences knowledge acquisition in other subject areas.

Early childhood professionals do need to approach the apparent success of strategies instruction techniques with some degree of caution. Some circumstances or types of strategies may lead to less success with younger children. Bjorklund and Harnishfeger (1987) found that 3rd-graders were not as proficient in using an organizational strategy, including a mnemonic device, compared to older children and adults. While these researchers recognized that motivation and practice can influence effective use of strategies, their findings indicated that the age of the child was the most influential factor in their study. Noting that increased age is associated with more efficient processing of information, the researchers pointed out that the mental

effort expended by younger children to remember the strategy may have inhibited their actual use of it. This study suggests that if strategies instruction is used with younger children or those with limited mental resources, care must be taken to match the type and complexity of the strategy to the ability of individual children. Bjorklund and Harnishfeger recommend gradually increasing the sophistication of memory strategies, as the child's cognitive development dictates (Bjorklund & Harnishfeger, 1987).

The research on learning strategies instruction summarized above focuses on planned explicit teaching. Evidence exists, however, that the use of strategies instruction can be unplanned, occurring in naturalistic contexts and at a very early age. Van Kleeck, Alexander, Vigil, and Templeton (1996) found that the transmission of information structures for deriving meaning from stories are modeled for infants during storyreading with mothers. Furthermore, the findings of this study corroborate those of previous studies on two points: 1) culture appears to influence the types of strategies the mothers modeled, and 2) the cognitive demand on the child appears related to the frequency rate of the strategy modeled by the mothers (van Kleeck, Alexander, Vigil, & Templeton, 1996). Future studies of strategy teaching with infants could help professionals working with infants and their families to better understand the early influence of informal strategies transmission on cognitive development and socialization processes. Research should be done to determine if planned strategies modeling has a positive effect on the cognitive or social development of infants with special needs. This type of research could yield findings that would significantly influence future design of early intervention strategies.

Children who are bilingual or who have limited English proficiency benefit from strategies instruction to improve reading comprehension. Once strategies are acquired, studies indicate that even children with limited English proficiency can transfer their skills to reading in English. Research findings also suggest that strategies instruction may be even more critical as children in the linguistic minority progress through elementary school. Continued strategies instruction seems to prepare these children to meet the increasing challenges of literacy (Bartolome, 1993).

Activating Prior Knowledge

One of the reasons transactional strategies instruction improves children's thinking over time is that these strategies utilize prior knowledge. To gain meaning from text, a reader is constantly comparing new information to existing knowledge. Therefore, as the fund of knowledge gained through strategy usage burgeons, the use of transactional strategies for reading comprehension becomes increasingly fruitful (Pressley et al., 1995).

Prior knowledge is one of the key variables identified as an influence on children's learning (Wang, Haertel, & Walberg, 1993/94). Ensuring the presence of certain prerequisite skills is necessary for content-specific strategies instruction (Anderson, 1996).

Ausubel (1968) sought to activate prior knowledge as part of his strategies for enhancing learning, which he termed "advanced organizers." Ausubel recommended providing students with an overview or framework for new learning, based on previous advanced organizers. He called these frameworks "expository organizers." He

recommended a second type of advanced organizer, a "comparative organizer," when a teacher wished to begin with familiar situations and build new learning upon the previously acquired foundation. Freiberg and Driscoll (1996) suggest using advanced organizers to prepare children for new lessons or units of study. In inclusive early childhood classrooms, advanced organizers should be limited and simple. Prior to reading Eric Carle's book *The Very Hungry Caterpillar* (1968), for example, a teacher could ask children to tell what they already know about caterpillars. A three-dimensional bulletin board illustrating the life cycle of a butterfly could serve as another advanced organizer, which the teacher could display several days before reading the story.

Activating prior knowledge also is emphasized in second language acquisition. A variety of strategies have been tried to facilitate the transfer of knowledge gained through a child's primary language to learning activities conducted in a second language. Language experience approach techniques, questioning frames, and graphic organizers are useful in helping children access prior knowledge and create links to new information. Moreover, by providing opportunities for children to relay personal, cultural experiences, the teacher values the child's background knowledge base (Bartolome, 1993; Clark, 1995).

Mediated Learning Experiences

Mediated learning experiences (MLEs) serve as intermediaries between the child and his environment. The teacher strives to increase the salience of certain aspects of the learning environment to optimize children's learning. As with learning strategies, MLEs also help a child learn how to learn. Notari-Syverson, Cole, Osborn, and Sherwood (1995) report success using MLEs in a preschool curriculum—the Mediated Learning Program (MLP)—for children with and without disabilities. During typical preschool activities, teachers used a variety of ways to mediate learning. A teacher might rearrange materials, ask questions, help a child focus attention on relevant aspects of a task, or model learning strategies. The teachers integrated MLEs into daily activities and routines to develop cognitive and social strategies, such as planning, classification, and effective communication. Some children spontaneously began to ask each other questions that the teachers had modeled. These authors point out that the content independence of these strategies enables teachers to use them in various cultural contexts. Improvements in self-confidence and social relationships were noted as children gained competence in strategic learning (Notari-Syverson & Shuster, 1995).

Questioning. Questions can serve various functions during the mediation of learning activities. Teachers can encourage children to express their feelings, or describe their actions or activities, through open-ended questions such as "What are you doing?" Questions can challenge or pose a problem-solving situation that develop children's thinking skills. For example, a teacher can stimulate thinking and bring closure to a lesson that compares unit blocks by asking, "Which of these lines is longer?" (Cavallaro et al., 1993).

Questions can stimulate young children's curiosity, creativity, and imagination.

Divergent questions that encourage a variety of answers can help children develop higher-order thinking skills. Through questioning, teachers can invite children to "make things better with their imagination." For example, a teacher can ask, "What would look better if it were larger?" or "What would be nicer if it were softer?" Teachers can help children acquire concepts in creative ways by framing questions that involve the attributes of that concept. For example, if children are exploring with ice cubes in a water table, the teacher might ask, "What is making the water cold?," "How can we use ice?," or "What else floats on the water like the ice?" The teacher could add a pitcher of warm water and ask, "Why is the ice melting?" The teacher can present a creative problem-solving situation by asking, "What would happen if all the ice in the world melted?" or "What would happen if all the water in the world froze?" A challenge question might be, "In how many different ways can you use ice?" (Mayesky, 1995). Children's answers to divergent questions can become a valuable source of data. Children who are highly creative may respond with a wide variety of answers or unusual responses. Teachers can use information regarding what children know about particular concepts to plan future learning activities.

Anticipating opportunities for questioning is an important part of instructional planning. By formulating questions in advance, teachers can provide more specific and effective mediation. Preplanned questions can be displayed to accomplish different purposes or to associate with specific materials or activities. Questions should vary in type and levels of difficulty so that teachers can match their mediation strategies to the abilities and goals of individual children.

Limiting choices. While the inclusive environment offers a variety of materials and learning activities to children, many children with disabilities find it difficult to make an independent choice. Explicit teaching may be necessary to help these children learn to choose from the abundant opportunities of an inclusive learning environment. One strategy, using behaviorist techniques, is to offer only two or three activities or materials. Visual prompts, such as a photograph of the activity or the material itself, help make the options more concrete. Gradually, the number of choices offered can be increased, and visual prompts removed (Cavallaro et al., 1993).

TECHNOLOGY-BASED STRATEGIES

While teachers usually focus on computers as a primary technological tool, other options also fit this category. Tape recorders, television, video cameras, and videotapes are simple, more familiar technological tools we tend to take for granted. At the other end of the spectrum, innovative, complex technology, such as multimedia and telecommunications, are now being used in early childhood classrooms (Peha, 1995). Technology-based strategies are methods and techniques that enable teachers to maximize the use of technological tools to enhance young children's learning.

Technology also can serve a compensatory or assistive purpose for young children with disabilities. This type of technology, usually referred to as assistive technology, encompasses various aids, devices, and equipment that

afford greater independence to individuals with disabilities. Such equipment may be simple, such as rubber grips to help a child hold a pencil more efficiently, or sophisticated, such as touch screen interactives, adaptive keyboards, and voice-activated switches. Equipment to help children gain greater mobility, such as walkers, wheelchairs, or motorized scooters, makes the learning environment more accessible. Corner chairs, standing tables, and other positioning equipment can help certain children gain greater proximity to their peers during play and other activities. Adaptive toys with microswitches can prompt infants and toddlers to explore their environment. Children with communication disorders or those who are deaf or hard of hearing may need augmentative or alternative communication devices (Parette, Hourcade, & VanBiervliet, 1993).

The use of assistive technology often requires changes to the teaching strategies and facilitation methods that teachers use. Therefore, when children needing assistive technology tools are included in early childhood settings, teachers must become familiar with ways to incorporate these materials into the learning environment.

Strategic use of technology is a powerful tactic for fostering the growth and development of diverse groups of young children in inclusive early childhood education settings. Early debates regarding the appropriateness of using technology, primarily computers, in early childhood settings have given way to research and the subsequent reevaluation of philosophical stances (Bredekamp & Rosegrant, 1994). Research points to the value of technology for enhancing young children's development and learning (Clements, 1994; Haugland & Shade, 1994; Haugland & Wright, 1997). A caveat remains, in that technological resources must be carefully selected and used appropriately. Consequently, national guidelines have been developed to help early childhood teachers use technological resources wisely (National Association for the Education of Young Children, 1996). While some teachers are hampered by budget constraints or personal resistance to technological advances (Haugland, 1994), others are recognizing the powerful contribution these tools can make to early childhood education.

Technological resources are valuable when accommodating diverse groups of children with a wide range of abilities. Technology offers a variety of innovative ways to support diverse learning styles and needs (Haugland & Wright, 1997). Ready-to-use computer software and multimedia packages are convenient ways to expand children's activity and learning choices (Reynolds & Barba, 1996).

Assistive technology can help some children circumvent their weaknesses so they can work more efficiently through stronger modes of functioning (Winter, 1994/95, 1997). Computers, the most prevalent type of assistive technology, can enable children with disabilities to demonstrate abilities beyond teachers' expectations. Computers are adaptable, motivating, and flexible tools that allow children to exert control over their learning (Oddone, 1993; Papert, 1980; Ryba, Selby, & Nolan, 1995). New Zealand educators report cases of children with disabilities achieving unanticipated successes through computer applications, which revealed unrecognized capabilities possessed by these children (Ryba et al., 1995). These reports reinforce the validity of a basic premise of inclusion. That is, children with disabilities, even those

with intellectual limitations, can succeed in learning if teachers identify their strengths and provide well-suited accommodations. Computers have proven to be a powerful tool for accommodating individual children, while maintaining their integration within their peer group.

Creating a Holistic Learning Environment

When teachers offer young children experiences with computers that are developmentally appropriate, they create a holistic learning environment. Children are able to integrate and use language, mathematical skills, scientific inquiry, expressive arts, and other skills related to the early childhood curriculum (Haugland & Wright, 1997). Giving children the opportunity to integrate their skills in technologically oriented tasks that are appropriate and interesting is consistent with the goals of ECI programs, as outlined in Chapter 2.

Rights to Assistive Technology

While it may be desirable to have technology available to enrich the curriculum and learning activities of typical young children, it can be essential for some children with disabilities. Assistive technology devices needed to improve a child's functioning and allow participation in learning activities are a legal right to certain children under the provisions of the Individuals With Disabilities Education Act (P.L. 101-476). IDEA underscores an earlier mandate, the Technology-Related Assistance for Individuals With Disabilities Act of 1988 (P.L. 100-407), that provided for the use of assistive technology to enhance the lives of children and adults with disabilities (Parette et al., 1993; Polloway & Patton, 1997). IDEA also mandated the provision of services regarding the procurement and use of those assistive technology devices needed to enhance the functioning of children in their learning environment (Parette et al., 1993). When assistive technology services needed by a child are technical, it is wise to elicit the consultation of professionals who specialize in this particular area. Teachers still play a role in day-to-day use of assistive technology, however. Therefore, instructional strategies used by the teacher must take into account the assistive technology use. Teachers can serve as a resource person to help parents use the assistive technology at home.

"At-risk" children. Technology-based strategies embedded in an integrated curriculum approach also have positive results with children who are "at risk" of school failure. Rather than using textbooks and worksheets in the primary grades, "at-risk" children can work in collaborative groups, using computers and videodisc technology to acquire concepts or develop problem-solving skills in realistic contexts (Duttweiler, 1992).

Informed Decisions

The success of technology-based strategies depends heavily on the well-informed decisions of teachers regarding their use. Good judgment is critical to maintaining a balance between technological activities and other appropriate options in early childhood settings. With the myriad of technological products available, teachers must use critical thinking to

guide their choices (National Association for the Education of Young Children, 1996).

Keeping abreast of new technological resources and products can result in more effective teaching. A growing number of journals and popular publications can help teachers discover the latest products and ways to use these resources. The Internet is another source of information. Asking to have your name placed on the mailing lists of major vendors can ensure a steady stream of product information.

Facilitating Technology Experiences

Children's first experiences with computers and other technological devices should be positive. While teachers can provide encouragement, forcing computer use is unacceptable. Girls in the primary grades, when gender differences in computer use become noticeable, may need extra encouragement. Teachers in ECI programs must take steps to ensure that computers are equally available to both girls and boys. Linking computer use to behavioral strategies can result in inequities. When teachers encourage boys to use computers as an alternative to more active or aggressive play, boys tend to predominate over girls in computer use. As a result, girls have fewer opportunities to use these resources (Haugland, 1994).

Integrated Use of Technology

Simply learning about technology and how to operate technological tools is an inappropriate goal for early childhood settings. An appropriate goal is to help children become more adept learners by using technology as a *tool* in their learning process (Prickett, Higgins, & Boone, 1994). Consequently, technology used in synchrony with the existing early childhood curriculum is the best way to help children learn. If children are conducting an in-depth exploration of a theme, such as transportation, they could use computers to gain information, prepare reports, and draw pictures. They could use cameras and video recorders to document their discoveries during field trips to the train station or marina.

It is critical to integrate technology into the curriculum for *all* children. Isolation, rather than inclusion, may occur if technology experiences, such as computer applications, are offered only to children with disabilities. Integrating technology into the curricular activities of all children results in greater cooperation and better opportunities to include children with disabilities into activities with their peers.

Teachers can easily integrate multimedia programs designed for young children across the curriculum. These programs promote active engagement and can span a wide range of ability levels. Teachers can create their own multimedia programs that incorporate individual instructional themes and goals (Ryba et al., 1995).

Cooperative Computer Activities

Collaborative computer use may impart special benefits. Some reports suggest that computers could help enhance the cognitive and literacy development of second language learners at various ages. Some reports suggest that collaborative literacy activities using a computer may encourage greater use of writing strategies. A pilot study of bilingual 4th-graders who wrote cooperatively using a computer found that

these children exhibited more effective literacy skills and employed a greater number of process strategies, compared to their monolingual counterparts (Van Haalen, 1990). Younger bilingual children also have benefited from using computers to enhance their literacy development. In one case study, teachers encouraged kindergartners in a bilingual program to write collaboratively, using a computer. As the teachers listened to the children's verbalizations during the writing process, they gained insights regarding how the children activated prior knowledge and linked it to new information (Clark, 1995).

In addition, cooperative learning with computers is an effective strategy for improving the social development of children with disabilities. A distinct advantage of this technology-based strategy is that the social skills are practiced within a curricular context (Ryba et al., 1995).

Supplemental Curricular Products

Carefully selected technology products can engage children in the curriculum in innovative, and often very effective, ways. Some technological products can be used in the primary grades as more interactive substitutes for basals or textbooks. One elementary school serving a multilingual population of children in suburban Chicago implemented a bilingual technology-based science program. While the content of the curriculum paralleled the typical textbook versions, the laser videodisk technology was highly visual and interactive in nature. Introduced in the primary grades, this technology-based set of resources augmented hands-on science experiences (Curtis, 1995).

Evaluation of Instructional Strategies

Technology can help teachers monitor their instructional strategies and interactions with children to ensure the use of practices that are gender-fair and equitable to all children in their inclusive classrooms. By periodically videotaping classroom interactions, teachers can become more aware of practices that indicate bias. Research indicates that teachers' attitudes, behaviors, and practices can be critical in accommodating children, especially girls, in learning environments. Teachers' questions, communication, and feedback are sensitive to gender. Video technology allows teachers to engage in self-evaluation, which may lead to greater awareness of gender-sensitive behaviors and teaching practices (Mann, 1994).

COMMUNICATION-BASED STRATEGIES

A key goal of inclusive programs is to prepare children for participation in a global community where communication and literacy skills are vital. Consequently, communication-based strategies are critical for enhancing the communication skills and literacy development of young children in inclusive settings. Communication-based strategies include techniques designed to encourage children to engage in conversational interactions that promote the development of language and communication skills. Communication-based strategies also are valuable tools teachers can use during activities that foster the development of literacy skills in children.

Language Experience Approach

The language experience approach, a highly effective emergent literacy method, builds upon the language abilities children already possess. Dictation and transcription strategies accommodate each child's developmental level, and help children view reading and writing as concrete processes. This approach is particularly applicable with children who are slow learners, second language learners, or speakers of nonstandard dialects. These children benefit from producing personalized reading materials that build from their current levels of language and incorporate their own dialectical patterns. An individual "word bank," a set of cards with vocabulary specifically requested by the child, helps children expand their language abilities (Salinger, 1996).

While this approach accommodates individual learners and does focus on ability, isolation is a risk. Teachers also must include children in group literacy activities. For example, a small group of children can dictate their reactions to a field trip or other experience as a teacher records their comments on a poster. Through such shared language experience activities, children can serve as models for one another, expanding the language skills of all children. Clark (1995) found that this language experience approach expanded on the first language abilities of predominantly Spanish-speaking kindergartners.

Boys can benefit from a language experience approach used in the primary grades. Boys' language and interests often differ from the themes typically portrayed in a basal reading series. The language experience approach gives boys the opportunity to incorporate their own language and interests. Initial literacy experiences for boys should encourage writing as a mode of expression, rather than emphasizing the mechanics of grammar, word usage, and punctuation. Moreover, deemphasizing penmanship accommodates the tendency of young boys to develop their fine motor skills later than girls (Grossman & Grossman, 1994).

Conversational Strategies

Preschoolers with delayed language can develop communication skills, both at home and in school, through the use of conversational strategies embedded in story reading contexts. McNeil and Fowler (1996) recommend four strategies to enhance children's expressive language during small-group story reading activities. First, teachers use specific praise to recognize children's comments offered during the story. Second, expansions of the child's comments can be added to the praise. Third, open-ended questions elicit more language from the child. Fourth, eye contact and pauses prompt a child who rarely responds. Teachers should record several story reading sessions to determine how frequently they use each strategy. Subsequent recordings of story reading sessions will show if children have increased the number of turns they take during conversations. Training parents to use these strategies as well can strengthen the continuity between home and school learning environments (McNeill & Fowler, 1996).

Second Language Acquisition

ECI programs serving linguistically diverse groups of children can use communication-based strategies to help integrate second languages into learning activities. These approaches use natural contexts for second language acquisition and strive for an environment that minimizes anxiety and stress. According to Krashen's (1982) affective filter concept, children are more likely to comprehend messages conveyed through a second language when they do not feel undue pressure to learn. Krashen believed that comprehension of language is influenced by a person's affective state. Communication-based methods try to create a relaxed, context-rich scenario for second language acquisition. Simplified speech, coupled with visual or physical cues, makes messages in the second language more comprehensible (Crawford, 1991).

Thematic, interdisciplinary curricula that incorporate music, art, drama, and literature are effective frameworks for communication-based approaches to dual language development. Manipulatives and realia can be used to stimulate concept development; vocabulary introduced in context assists children's second language acquisition and cognitive development (Clark, 1995; Leone, 1995; Medina, 1995). Pictures, charts, and other graphics can improve children's understanding of a second language and help them organize their ideas (Medina, 1995). Children with very limited knowledge of their second language can benefit from Total Physical Response (TPR) games that require children to react to teacher-initiated commands with actions (Clark, 1995; Leone, 1995). For children in kindergarten and primary levels, communication-based strategies embedded in a whole language approach can provide second language learners with various contexts for reading, listening, and writing activities, in shared or individual formats (Clark, 1995; Schauber, Morisette, & Langlois, 1995).

Inclusive classrooms can encourage bilingual children to engage in more balanced use of their home and second languages. By permitting children to have more choice in which language they use for literacy activities, teachers may help promote biliteracy for all the children. For example, when children read aloud in their primary language to an audience of classmates, the other children may be motivated to pursue proficiency in a second language (Freeman & Nofziger, 1991). By allowing children to choose, the teacher gives children natural opportunities to experiment with their second language. Crowell (1991) reported that children's language choices reflect different social or academic purposes. The children often base their language choices on what they think will be most comprehensible to their intended audience.

Guillermo and the Robot

Guillermo, a gifted child, was acquiring English as a second language. His teacher, Ms. Flores, wanted to offer Guillermo a choice regarding which language to use, Spanish or English. She brought a plastic building block set to the center where Guillermo was playing alone, knowing that he was very skilled at construction tasks. Guillermo's eyes brightened when he saw the blocks and he eagerly started to assemble them. Several other children began to watch. One spoke to Guillermo in Spanish. "He says he is making a robot," the boy announced to the others. Several children were skeptical. "How can you build a robot, Guillermo? You

should build a house or something," one child said. Guillermo began to discuss his ideas in English. Eventually, the robot had arms, a body, a head, and legs that rolled on wheels! It stood as high as a child. By recognizing Guillermo's strength and interest in construction tasks, Ms. Flores prompted an opportunity for language use with a choice for Guillermo.

Children gain in communicative competence through engagement in collaborative activities with linguistically heterogeneous groups of their peers. In these mixed-group contexts, the second language is relevant to the experience and used to convey meaning. Conceptual development in second language learners appears to need some level of bilingual education support. For example, teaching vocabulary relevant to curricular ac-tivities in the second language appears to enhance academic achievement (Saville-Troike, 1984).

ECI programs often use a combination of approaches and a variety of strategies to accommodate children from language minority groups (Medina, 1995). The goal is to integrate the home languages and cultures of children into daily activities. Bilingual or multilingual signs, books, and literacy activities help children feel comfortable using their native language at school. Displays or pictures of cultural artifacts indicate a valuing of diversity. Teachers can place children in cooperative learning groups with others who speak their first language. Schools can recruit volunteers and parents from ethnic minority communities to serve as tutors, resource persons, or assistants. Creating a bond between the school and community provides natural opportunities for children to converse in their home language with proficient language models who fully understand the child's communication (Cummins, 1986, 1989).

Developmental Approaches

A developmental or maintenance approach to bilingual education supports the continued development of children's home language, while a second language is being acquired. Some studies suggest that children benefit from increased cognitive flexibility when such developmental approaches are used. Short-term transitional approaches that rush to move children from bilingual education into monolingual instructional environments may undermine the scholastic success of second language learners. Some studies indicate that children require long-term bilingual education support to achieve a linguistic foundation that is sufficient for academic success. While it appears that children are able to learn basic interpersonal communication skills, or "playground English," in two years or less, the proficiency needed for academics requires longer bilingual education support. According to Jim Cummins's (1986, 1989) threshold hypothesis, a child needs to achieve a minimum level of cognitive-academic language proficiency before the knowledge and skills developed in this linguistic foundation are transferable for use in the second language. Research suggests that reaching this minimum level takes from five to seven years. Therefore, developmental bilingualism is a long-term approach that requires a substantial commitment of time, money, and resources. Furthermore, teachers need proficiency, rather than minimal competence, in two or more languages. Consequently, developmental bilingual approaches may not be feasible in particular circumstances.

Sheltered Language Approaches

A sheltered language approach incorporates a variety of strategies to help children gain meaning from communication in their second language. According to Stephen Krashen's (1982) comprehensible input hypothesis, understanding input or messages in the second language is essential for acquisition of that language. That is, the quality, rather than the quantity, of second language exposure determines the level of acquisition. While the second language of the child is the language of input, efforts are taken to ensure that children comprehend the messages transmitted and are "sheltered" from language input they cannot comprehend. Research suggests that directly translating communication by switching from one language to another during instruction is ineffective. Such concurrent translation usually results in children unconsciously favoring input given in their home language. Sheltering methods eliminate the possibility of such unconscious avoidance reactions (Crawford, 1991).

A sheltered language approach is a practical method when no teacher who speaks the child's primary language is available, or when many different languages are spoken by children in the program (see Wink et al., 1995). Using the children's second language, concepts are introduced in context with the help of various props. As children's speech begins to emerge in the second language, children can participate in sheltered language arts activities. Higher test scores and greater motivation to read have been reported following the implementation of these teaching methods (Medina, 1995).

DIFFERENTIAL EFFECTS OF STRATEGIES

Teachers should be aware that commonly used techniques or combinations of strategies can have differential effects. Biederman, Davey, Ryder, and Franchi (1994) studied the use of popular modeling techniques for teaching children, ages 4 to 10, who evidence developmental delays associated with a variety of diagnoses, including autism, cerebral palsy, and Down syndrome. The effects of active modeling with and without reinforcement were compared to passive modeling. For some children, positive verbal reinforcement for successful approximations was used during episodes of active modeling, also called "hand over hand" interactive or participant/self-modeling. Another group of subjects received active modeling without verbal or gestural reinforcement. The third group of subjects received no reinforcement as they passively watched the teacher model the task. Interestingly, these researchers found that passive observation of modeling was more effective than active modeling. Active modeling paired with positive verbal reinforcement proved to be most inefficacious. Attention problems and difficulties in processing verbal information were suggested as possible reasons for the apparent inability of children with marked delays to benefit from these strategies.

The Biederman et al. (1994) study has several implications for inclusion programs. It underscores the importance of equipping teachers with a wide variety of strategies and techniques. Teachers must be aware that some tactics will prove more useful with some children than with others; therefore, it is vital to match teaching strategies to children's characteristics. Teachers must be flexible and

willing to change their strategies when necessary. It is also important to monitor the progress of individual children and practices in inclusive settings. Diligent recordkeeping can reveal the effects of teaching practices on developmental learning. Adjustments and changes in techniques and strategies should be guided by actual data (see Chapter 5 for methods of collecting such data).

The strength of passive modeling may lend credence to the inclusion movement itself. Inclusive programs offer children with severe delays a wealth of opportunities to observe the modeling of peers, as well as teachers. If these findings prove to be generalizable to both formal and informal modeling in inclusive settings, the assumption that learning opportunities for children with marked developmental delays are enhanced in general care and education settings may receive further validation (Biederman, Davey, Ryder, & Franchi, 1994). Saville-Troike (1984) also reported inconsistency in the effects of different types of strategies used to teach English as a second language. Therefore, teachers must be ready to use various strategies and assess their effectiveness (Saville-Troike, 1984).

VALIDATING INCLUSIVE PRACTICES

Strides definitely have been made in the effort to include diverse children with multiple ability levels in early childhood settings. Further research and development, however, is needed to establish the efficacy of practices that appear to be promising. The effectiveness of practices across different care and educational contexts, as well as the results of strategies for all children, must be determined. In addition, studies must reveal whether the strategies require additional training, time, or personnel for successful implementation. Other key issues include whether the inclusive practices can be implemented without adapting the existing general education curricula, and the degree of satisfaction reported by teachers, families, and children. Research to date indicates that some practices' use may be limited in certain situations. Therefore, continued efforts to validate inclusive practices in various inclusion settings through efficacy research is critical (Fisher, Schumaker, & Deshler, 1995).

CONCLUSION

Clearly, enhancing the learning of a full range of young children in the same ECI setting is a complex responsibility. Unfortunately, good intentions alone are not sufficient for accommodating diverse learners. Facilitating the learning of each child through peer interactions and activities matched to their individual needs requires serious thought and preparation. Teachers in ECI programs must become knowledgeable regarding the kinds of strategies and practices that can be used to accommodate diverse learners. Furthermore, interactive training opportunities for teachers to learn to apply these strategies are critical.

References

Anderson, M. M. (1996). Biting into big numbers. *Teaching Exceptional Children, 28*(4), 26-27.

Atwater, J. B., Carta, J. J., Schwartz, I. S., & McConnell, S. R. (1994). Blending developmentally appropriate practice and early childhood special education: Redefining best practice to meet the needs of all children. In B. L. Mallory & R. S. New (Eds.), *Diversity and developmentally appropriate practices: Challenges for early childhood education* (pp. 185-201). New York: Teachers College Press.

Au, K. H., & Kawakami, A. J. (1991). Culture and ownership: Schooling of minority students. *Childhood Education, 67*, 280-284.

Ausubel, D. (1968). *Educational psychology: A cognitive view.* New York: Holt, Rinehart and Winston.

Bailey, D. B., & McWilliams, R. A. (1990). Normalizing early intervention. *Topics in Early Childhood Special Education, 10*(2), 33-47.

Bailey, D. B., & Wolery, M. (1992). Strategies for intervention: Teaching procedures and options. In D. Bailey & M. Wolery (Eds.), *Teaching infants and preschoolers with disabilities* (2nd ed., pp. 161-196). New York: Merrill/Macmillan.

Baker, J., & Zigmond, N. (1990). Are regular education classes equipped to accommodate students with learning disabilities? *Exceptional Children, 56*(6), 515-526.

Bartolome, L. I. (1993). Effective transitioning strategies: Are we asking the right questions? In J. V. Tinajero & A. F. Ada (Eds.), *The power of two languages: Literacy and biliteracy for Spanish-speaking students* (pp. 209-219). New York: Macmillan/McGraw-Hill School Publishing.

Biederman, G. B., Davey, V. A., Ryder, C., & Franchi, D. (1994). The negative effects of positive reinforcement in teaching children with developmental delays. *Exceptional Children, 60*(5), 458-465.

Bjorklund, D. F., & Harnishfeger, K. K. (1987). Developmental differences in the mental effort requirements for the use of an organizational strategy in free recall. *Journal of Experimental Child Psychology, 44*, 109-125.

Bodrova, E., & Leong, D. (1996). *Tools of the mind: The Vygotskian approach to early childhood education.* Englewood Cliffs, NJ: Merrill/Prentice-Hall.

Boom, S. E., & Fine, E. (1995). STAR: A number writing strategy. *Teaching Exceptional Children, 27*(2), 42-45.

Bredekamp, S. (Ed.). (1987). *Developmentally appropriate practice in early childhood programs serving children from birth through age 8.* Washington, DC: National Association for the Education of Young Children.

Bredekamp, S., & Copple, C. (Eds.). (1997). *Developmentally appropriate practice in early childhood programs* (Rev. ed.). Washington, DC: National Association for the Education of Young Children.

Bredekamp, S., & Rosegrant, T. (1994). Learning and teaching with technology. In J. L. Wright & D. D. Shade (Eds.), *Young children: Active learners in a technological age* (pp. 53-61). Washington, DC: National Association for the Education of Young Children.

Bricker, D., & Cripe, J. J. W. (1992). *An activity-based approach to early intervention.* Baltimore: Paul H. Brookes.

Brown, M. H., Althouse, R., & Anfin, C. (1993). Guided dramatization: Fostering social development in children with disabilities. *Young Children, 48*(2), 68-71.

Calderon, M. (1996). Bilingual, bicultural, and binational cooperative learning communities for students and teachers. In J. L. Flores (Ed.), *Children of la frontera: Binational efforts to serve Mexican migrant and immigrant students* (pp. 203-228). Charleston, WV: ERIC Clearinghouse on rural education and small schools.

Carle, E. (1968). *The very hungry caterpillar.* New York: World Publishers.

Carta, J., Schwartz, I., Atwater, J., & McConnell, S. (1991). Developmentally appropriate practice: Appraising its usefulness for young children with disabilities. *Topics in Early Childhood Special Education, 11*(1), 1-20.

Cavallaro, C. C., Haney, M., & Cabello, B. (1993). Developmentally appropriate strategies for promoting full participation in early childhood settings. *Topics in Early Childhood Special Education, 13*(3), 293-307.

Clark, E. R. (1995). "How did you learn to write in English when you haven't been taught in English?" The language experience approach in a dual language program. *Bilingual Research Journal, 19*(3 & 4), 611-628.

Clements, D. H. (1994). The uniqueness of the computer as a learning tool: Insights from research and practice. In J. L. Wright & D. D. Shade (Eds.), *Young children: Active learners in a technological age* (pp. 31-49). Washington, DC: National Association for the Education of Young Children.

Cook, R., Tessier, A., & Klein, M. D. (1996). *Adapting early childhood curricula for children in inclusive settings* (4th ed.). Englewood Cliffs, NJ: Merrill/Prentice-Hall.

Crawford, J. (1991). *Bilingual education: History, politics, theory, and practice* (2nd ed.). Los Angeles: Bilingual Educational Services.

Crocker, A., & Orr, R. (1996). Social behaviors of children with visual impairments enrolled in preschool programs. *Exceptional Children, 62*(5), 451-462.

Crowell, C. G. (1991). Becoming biliterate in a whole language classroom. In Y. M. Goodman, W. J. Hood, & K. S. Goodman (Eds.), *Organizing for whole language* (pp. 95-111). Portsmouth, NH: Heinemann.

Cummins, J. (1986). Empowering minority students: A framework for intervention. *Harvard Educational Review, 56*(1), 18-36.

Cummins, J. (1989). *Empowering minority students.* Sacramento, CA: California Association for Bilingual Education.

Curtis, M. G. (1995). The semi, self-contained classroom: An island of innovations. *Bilingual Research Journal, 19*(3 & 4), 537-550.

Deiner, P. (1993). *Resources for teaching children with diverse abilities* (2nd ed.). Fort Worth, TX: Harcourt Brace College Publishers.

Dempsey, J. D., & Frost, J. L. (1993). Play environments in early childhood education. In B. Spodek (Ed.), *Handbook of research on the education of young children* (pp. 306-321). New York: Macmillan.

Diamond, K., Hestenes, L., & O'Connor, C. (1994). Integrating young children with disabilities in preschool: Problems and promises. *Young Children, 4*(2), 68-75.

Drinkwater, S., & Demchak, M. (1995). The preschool checklist: Integration of children with severe disabilities. *Teaching Exceptional Children, 28*(1), 4-8.

BEST COPY AVAILABLE

Duttweiler, P. C. (1992). Engaging at-risk students with technology. *Media & Methods, 12*, 6-8.
Eanes, R. (1997). *Content area literacy: Teaching for today and tomorrow*. Albany, NY: Delmar.
Fad, K. S., Ross, M., & Boston, J. (1995). Using cooperative learning to teach social skills to young children. *Teaching Exceptional Children, 27*(4), 28-34.
Ferber, J. (1996). Therapeutic teacher, therapeutic classroom. In L. Koplow (Ed.), *Unsmiling faces: How preschools can heal* (pp. 45-63). New York: Teachers College Press.
Fisher, J. B., Schumaker, J. B., & Deshler, D. D. (1995). Searching for validated inclusive practices: A review of the literature. *Focus on Exceptional Children, 28*(4), 1-20.
Freeman, Y. S., & Nofziger, S. D. (1991). WAlkM To RnM33: Vien Vinidos al cualTo33. In Y. M. Goodman, W. J. Hood, & K. S. Goodman (Eds.), *Organizing for whole language* (pp. 65-83). Portsmouth, NH: Heinemann.
Freiberg, H. J., & Driscoll, A. (1996). *Universal teaching strategies* (2nd ed.). Boston, MA: Allyn and Bacon.
Gersten, R. (1996). Literacy instruction for language-minority students: The transition years. *The Elementary School Journal, 96*(3), 227-244.
Gonzalez-Mena, J. (1997). *Multicultural issues in child care* (2nd ed.). Mountain View, CA: Mayfield.
Grant, R. (1995). Meeting the needs of young second language learners. In E. E. Garcia, B. McLaughlin, B. Spodeck, & O. N. Saracho (Eds.), *Meeting the challenge of linguistic and cultural diversity in early childhood education* (Vol. 6, pp. 1-17). New York: Teachers College Press.
Gross, A. L., & Ortiz, L. W. (1994). Using children's literature to facilitate inclusion in kindergarten and the primary grades. *Young Children, 49*(3), 32-34.
Grossman, H., & Grossman, S. H. (1994). *Gender issues in education*. Boston: Allyn and Bacon.
Hanline, M. F. (1985). Integrating disabled children. *Young Children, 40*(2), 45-48.
Hanline, M. F., & Fox, L. (1993). Learning within the context of play: Providing typical aarly childhood experiences for children with severe disabilities. *The Journal of the Association for Persons With Severe Handicaps, 18*(2).
Harper-Whalen, S., Walmsley, T., & Moore, K. (1991). *An introduction to teaching through play* (4). Missoula, MT: Montana University at Missoula.
Haugland, S. (1994). Computer accessibility: Who's using the computer in early childhood classrooms? *Day Care and Early Education, 22*(2), 45-46.
Haugland, S. W., & Shade, D. D. (1994). Software evaluation for young children. In J. L. Wright & D. D. Shade (Eds.), *Young children: Active learners in a technological age* (pp. 63-76). Washington, DC: National Association for the Education of Young Children.
Haugland, S. W., & Wright, J. L. (1997). *Young children and technology: A world of discovery*. Boston: Allyn and Bacon.
Hughes, F. P. (1995). *Children, play, and development* (2nd ed.). Boston: Allyn and Bacon.
Isenberg, J. P., & Jalongo, M. R. (1993). *Creative expression and play in the early childhood curriculum*. New York: Macmillan.
Joint Committee on Teacher Planning for Students with Disabilities. (1995). *Planning for academic diversity in America's classrooms: Windows on reality, research, change, and practice*. Lawrence, KS: The University of Kansas Center for Research on Learning.
Koplow, L. (1996a). Play therapy as early intervention. In L. Koplow (Ed.), *Unsmiling faces: How preschools can heal* (pp. 75-88). New York: Teachers College Press.
Koplow, L. (1996b). Playing for keeps: The value of open-ended play. In L. Koplow (Ed.), *Unsmiling faces: How preschools can heal* (pp. 107-122). New York: Teachers College Press.
Krashen, S. (1982). *Principles and practices in second language acquisition*. Oxford, England: Oxford Pergamon.
Leister, C. (1993). Innovative teaching in the 1990s: Technology competencies needed by teachers of preschool age children with severe disabilities. *Reading Improvement, 30*, 134-139.
Leone, B. (1995). A K-5 bilingual resource room: The first year. *Bilingual Research Journal, 19*(3&4), 551-569.
Lindfors, J. W. (1991). *Children's language and learning* (2nd ed.). Boston: Allyn and Bacon.
Mann, J. (1994). Bridging the gender gap: How girls learn. *Streamlined Seminar, 13*(2), 1-5.
Marks, J. W., Laeys, J. V., Bender, W. N., & Scott, K. S. (1996). Teachers create learning strategies: Guidelines for classroom creation. *Teaching Exceptional Children, 28*(4), 34-38.
Mason, S. A., & Egel, A. L. (1995). What does Amy like? Using a mini-reinforcer assessment to increase student participation in instructional activities. *Teaching Exceptional Children, 28*(1), 42-45.
Mayesky, M. (1995). *Creative activities for young children* (5th ed.). New York: Delmar.
McIntosh, R., Vaughn, S., Schumm, J., Haager, D., & Lee, O. (1994). Observations of students with learning disabilities in general education classrooms. *Exceptional Children, 60*(3), 249-261.
McNeill, J. H., & Fowler, S. A. (1996). Using story reading to encourage children's conversations. *Teaching Exceptional Children, 28*(4), 43-47.
Medina, S. L. (1995). K-6 bilingual programs in the Los Angeles metropolitan area. *Bilingual Research Journal, 19*(3&4), 629-640.
Meloth, M. S. (1991). Enhancing literacy through cooperative learning. In E. H. Hiebert (Ed.), *Literacy for a diverse society: Perspectives, practices, and policies* (pp. 172-183). New York: Teachers College Press.
Miller, R. (1996). *The developmentally appropriate inclusive classroom in early education*. Albany, NY: Delmar.
Moss, E. (1992). Early interactions and metacognitive development of gifted preschoolers. In P. S. Klein & A. J. Tannenbaum (Eds.), *To be young and gifted* (pp. 278-318). Norwood, NJ: Ablex.
National Association for the Education of Young Children. (1996). NAEYC position statement: Technology and young children—Ages three through eight. *Young Children, 51*(6), 11-16.
National Coalition of Advocates for Students. (1994). *Delivering on the promise: Positive practices for immigrant students*. Boston: Center for Immigrant Students, NCAS.
Notari-Syverson, A., & Shuster, S. (1995). Putting real-life skills into IEP/IFSPs for infants and young children. *Teaching Exceptional Children, 27*(2), 29-32.

BEST COPY AVAILABLE

O'Brien, M., & Bi, X. (1995). Language learning in context: Teacher and toddler speech in three classroom play areas. *Topics in Early Childhood Special Education, 15*(2), 148-163.
Oddone, A. (1993). Inclusive classroom applications. *Teaching Exceptional Children, 26*, 74-75.
Papert, S. (1980). *Mindstorms: Children, computers and powerful ideas*. Brighton, England: Harvester.
Parette, H. P., Jr., Hourcade, J. J., & VanBiervliet, A. (1993). Selection of appropriate technology for children with disabilities. *Teaching Exceptional Children, 26*, 18-22.
Peha, J. M. (1995). How K-12 teachers are using computer networks. *Educational Leadership, 53*(2), 18-25.
Peregoy, S. F., & Boyle, O. F. (1993). *Reading, writing, & learning in ESL: A resource book for K-8 teachers*. New York: Longman.
Polloway, E. A., & Patton, J. R. (1997). *Strategies for teaching learners with special needs* (6th ed.). New York: Merrill/ Macmillan.
Poplin, M. S. (1993). Making our whole-language bilingual classrooms also liberatory. In J. V. Tinajero & A. F. Ada (Eds.), *The power of two languages: Literacy and biliteracy for Spanish-speaking students* (pp. 58-67). New York: Macmillan/ McGraw-Hill School Publishing.
Pressley, M., Brown, R., Ell-Dinary, P. B., & Afflerbach, P. (1995). The comprehension instruction that students need: Instruction fostering activity constructively responsive reading. *Learning Disabilities Research & Practice, 10*(4), 215-224.
Prickett, E. M., Higgins, K., & Boone, R. (1994). Technology for learning . . . not learning about technology. *Teaching Exceptional Children, 26*(4), 56-60.
Reynolds, K. E., & Barba, R. H. (1996). *Technology for the teaching and learning of science*. Boston: Allyn and Bacon.
Ryba, K., Selby, L., & Nolan, P. (1995). Computers empower students with special needs. *Educational Leadership, 52*(2), 82-84.
Sadker, M., & Sadker, D. (1994). *Failing at fairness: How America's schools cheat girls*. New York: Charles Scribner's Sons.
Salinger, T. S. (1996). *Literacy for young children* (2nd ed.). Englewood Cliffs, NJ: Merrill.
Saville-Troike, M. (1978). *A guide to culture in the classroom*. Rosslyn, VA: National Clearinghouse for Bilingual Education.
Saville-Troike, M. (1984). What really matters in second language learning for academic achievement? *Tesol Quarterly, 18*(2), 199, 216-217.
Schauber, H., Morissette, P., & Langlois, L. (1995). The second language component of primary French immersion programs in Montreal, Quebec, Canada. *Bilingual Research Journal, 19*(3 & 4), 525-536.
Schumm, J., & Vaughn, S. (1991). Making adaptations for mainstreamed students: General classroom teachers' perspectives. *Remedial and Special Education, 12*(4), 15-24.
Silberman, M. (1996). *Active learning: 101 strategies to teach any subject*. Boston: Allyn and Bacon.
Slavin, R. (1995). *Cooperative learning: Theory, research, and practice* (2nd ed.). Boston: Allyn and Bacon.
Solomon, R. P. (1995). Beyond prescriptive pedagogy: Teacher inservice education for cultural diversity. *Journal of Teacher Education, 46*(4), 251-258.
Van Haalen, T. (1990). *Efficacy of word processing as a writing tool for bilingual elementary school students: A pilot study* (ED 318 233): Southwestern Educational Research Association.
van Kleeck, A., Alexander, E. I., Vigil, A., & Templeton, K. E. (1996). Verbally modeling thinking for infants: Middle-class mothers' presentation of information structures during book sharing. *Journal of Research in Childhood Education, 10*(2), 101-113.
Veenman, S. (1995). Cognitive and noncognitive effects of multigrade and multi-age classes: A best-evidence synthesis. *Review of Educational Research, 65*(4), 319-381.
Vygotsky, L. (1978). *Mind in society: The development of higher psychological functions*. Cambridge, MA: Harvard University Press.
Wang, M. C., Haertel, G. D., & Walberg, H. J. (1993/94). What helps students learn? *Educational Leadership, 51*(4), 74-79.
Wells, G., & Chang-Wells, G. (1988). The literate potential of collaborative talk. In M. MacLure, T. Phillips, & A. Wilkinson (Eds.), *Oracy matters* (pp. 95-109). Buckingham, UK: Open University Press.
Wink, J., Bender, C., Bravo, I., Putney, L., Reberg, R., & Whitehead, S. (1995). California: A picture of diverse language groups and ESL programs. *Bilingual Research Journal, 19*(3 &4), 641-659.
Winter, S. M. (1994/95). Diversity: A program for all children. *Childhood Education, 71*(2), 91-95.
Winter, S. M. (1997). "SMART" planning for inclusion. *Childhood Education, 73*(4), 212-218.
Winter, S. M., Bell, M., & Dempsey, J. (1994). Creating play environments for children with special needs. *Childhood Education, 71*(1), 28-32.
Wortham, S. (1994). *Early childhood curriculum: Developmental bases for learning and teaching*. New York: Macmillan College Publishing.

BEST COPY AVAILABLE

PART 3

FUTURE DIRECTIONS

CHAPTER 7

The Future of Inclusion and The ECI Model

KEY QUESTIONS

- *What are the next steps for the ECI Model?*
- *What can be done to facilitate policy development and foster the trend toward inclusive education in early childhood?*
- *How can we improve personnel preparation for inclusive education programs?*
- *What kinds of research questions remain unanswered regarding inclusive early childhood education?*
- *What methods might be used to explore these research questions?*

While the proposed ECI Model is grounded in cross-disciplinary theory and research, it must be subjected to rigorous empirical testing to establish its efficacy. A broad range of early childhood settings serve diverse groups of young children, including community child care centers, laboratory schools at colleges and universities, employer-related sites, and public schools. Consequently, the ECI model must be tested in a variety of settings so that valid comparisons can be drawn. Investigations also must be conducted with different populations of children. This proposed model is not a solution, but rather another step in a long journey; it is this author's attempt to stimulate further efforts to achieve inclusion that is well-informed by an accumulated base of empirical research.

POLICY DEVELOPMENT

Efforts To Build Consensus

Effective inclusive early childhood education depends upon consensus across fields. Blending theoretical foundations and establishing the validity of practices for this new paradigm demand further collaboration and greater unity among professionals. As mentioned in Chapter 1, consensus building efforts have begun. Inclusion has sparked professional debates across the fields of general early childhood education and early childhood special education. The movement toward inclusion has brought scrutiny to the theoretical foundations underlying various fields of education, and to the methods of teaching recommended by these fields.

Early debates centered upon whether NAEYC's original developmentally appropriate practice (DAP) guidelines (Bredekamp, 1987) were sufficient to inform the practices of inclusive early childhood programs. Comparisons of DAP and early childhood special education revealed many similarities, such as the constructivist theoretical plank. Major differences in the recommended practices of these fields also came to light, however. Early childhood special education practices emphasized comprehensive assessment, planning, and monitoring of progress for individual children. Outcome-based programs incorporated specific time lines, instructional strategies, assessment criteria, and family services. Principles for practice recommended in the DAP guidelines focused on young children in general, lacking the specificity of individually targeted interventions favored by special educators (Bailey & Wolery, 1992; Bricker & Cripe, 1992; Carta, Atwater, Schwartz, & McConnell, 1993; Carta, Schwartz, Atwater, & McConnell, 1991; Johnson & Johnson, 1992; Wolery, Strain, & Bailey, 1992). General early childhood education and DAP practices were criticized as being based largely on tradition and folklore, rather than on valid empirical research. Conversely, practices in special education were criticized for emphasizing directive teaching methods, systematic approaches, and vertical learning. Vertical learning refers to a child's advancement through a sequence or spiral of increasingly complex skills or curriculum content. This approach can shortchange children by limiting their opportunities for horizontal learning within meaningful contexts. Horizontal learning allows children to elaborate and expand on acquired concepts and curricular content that are relevant to them, prior to progressing toward more advanced skills (Johnson & Johnson, 1992).

Emphasis on Individual Appropriateness

In 1994, Mallory and New pointed out the failure of DAP guidelines to address atypical patterns of development exhibited by some children with exceptionalities. Moreover, these authors asserted that DAP reflected the values of middle-class America, rather than encouraging the use of practices that are responsive to the cultural backgrounds of individual children and their families (Mallory, 1994; New, 1994; New & Mallory, 1994). Through vigorous debates, traditional early childhood education and early childhood special education have moved toward greater consensus. A turning point in the debates appeared to be the agreement that determining the appropriateness of strategies for each child should be the primary emphasis (Carta, 1994; Johnson & Johnson, 1994). Next, joint personnel standards for the two fields were articulated (Division for Early Childhood of the Council for Exceptional Children, National Association for the Education of Young Children, & Association of Teacher Educators, 1995). Subsequently, NAEYC adopted a revised position statement on DAP that sought to allay some of the controversy and misinterpretation by defining developmentally appropriate practice in terms of how it addresses differences in children's development and abilities (Bredekamp & Copple, 1997). DAP now encourages teachers to assume a more active and responsive role in facilitating the learning of diverse young children by using a variety of teaching strategies, and by matching the intensity of those strategies to the needs of individual children (Bredekamp & Copple, 1997).

Much has been gained from the scrutiny of various disciplines and fields that address children during early childhood. General early childhood education has become involved in re-evaluating its theoretical background and traditional practices for salience in addressing the diversity that increasingly characterizes groups of young children. In special education, early interventionists have abandoned deficit curriculum approaches, which focused primarily on the remediation of children's weaknesses. Approaches now highlight and develop children's strengths, and early interventionists are more likely to use naturalistic approaches and authentic contexts to help individual children develop specific skills and concepts (Johnson & Johnson, 1992).

Expand Articulation Across Fields

Professional organizations play a pivotal role in supporting research and providing guidance to ECI programs. In 1992, Lay-Dopyera and Dopyera maintained that teachers in early childhood use a "largely intuitive set of practices." These authors highlighted the continuing importance of professional organizations in clarifying the concepts underlying current early childhood practice and in articulating viable alternatives. This flow of information is critical when developing personnel preparation programs that impart the skills and knowledge needed to include a full range of diverse children in early childhood settings. Thus, the guidelines developed conjointly by the Division for Early Childhood of the Council for Exceptional Children, the National Association for the Education of Young Children, and the Association of Teacher Educators represent a significant step forward in the ECI movement. These organizations collaboratively articulate a united view of the responsibilities and standards that should guide the preparation of personnel in inclusive early child-

hood settings. This endeavor can serve as a springboard to elicit further professional articulation and, perhaps, alliances.

Efforts to blend early childhood special education and general early childhood education must continue, and articulation must be expanded to include other fields. It is vital that practices addressing linguistic and cultural diversity, as well as those promoting gender equity, be more extensively integrated into recommended practices for early childhood and teacher preparation programs. Moreover, professional articulation regarding recommended practices for children with high ability is severely lacking. Far less has been done to integrate practices that challenge and support young children whose creativity, intellectual abilities, or other talents exceed those of their peers. In 1993, McLean and Odom noted that none of the NAEYC documents they reviewed addressed teaching gifted young children. Despite the "gifted strand" in DEC/CEC's recommended practices for early intervention (Division for Early Childhood of the Council for Exceptional Children, 1993), the revised DAP guidelines (Bredekamp & Copple, 1997) pay only meager attention to the care and learning of gifted and talented children. Barbour (1992) calls for articulation and collaboration between early childhood education and gifted education. She contends that by sharing ideas and seeking points of intersection, each field will be strengthened.

Other professional organizations could collaborate toward articulating and blending a greater cross-section of recommended practices and personnel standards with those of the general early childhood field, including Teachers of English to Speakers of Other Languages (TESOL), National Association for Bilingual Education (NABE), American Association of University Women (AAUW), and the National Association for Gifted Children (NAGC). Inviting further debate and collaboration across a broader range of professional organizations in these fields would be a substantial step toward building a more coherent theoretical foundation and pedagogical stance for early childhood inclusion. Such measures are fundamental for improving the quality of ECI programs.

PERSONNEL PREPARATION AND STAFF DEVELOPMENT

Improving Teacher Effectiveness

While policy development is important, policy alone is not sufficient to accomplish the goals of inclusion. The focus must be on implementation of program models and practices that promote inclusion. Research indicates that improving teacher performance boosts children's success in school. Creating a positive socio-cultural context with high-quality interactions between teachers and children effectively promotes learning. Fostering a child's sense of belonging in the learning community enhances performance and the development of self-esteem (Mallory & New, 1994; Wang, Haertel, & Walberg, 1993/94). Children benefit when they remain engaged in learning tasks and develop their cognitive processes, particularly metacognition (Wang et al., 1993/94). Unfortunately, research indicates teachers give meager attention to instructional planning. Moreover, time spent planning often

does not focus on the critical aspects that are most influential in promoting children's success in learning (Joint Committee on Teacher Planning for Students with Disabilities, 1995). Future research must address the effects of inclusion on teacher effectiveness. Sapon-Shevin (1990) suggests that the diversity of children's abilities in inclusion settings might serve as an incentive to encourage teachers to provide differentiated instruction, thus benefiting all children.

Content of Training

While teachers report satisfaction with the availability of resources to support inclusion, they indicate a need for additional training (Winter & Van Reusen, 1997; Wolery, Werts, Caldwell, Snyder, & Lisowski, 1995). Personnel preparation and staff development activities are key to helping teachers more effectively operationalize the concept of inclusion. It is vital, however, that personnel training reach beyond philosophy. Training must address planning, implementation, and practices that match the needs of individual children (Winter & Van Reusen, 1997). While establishing the validity of practices that help promote the goals of inclusion is important, preparing teachers to implement a full repertoire of strategies effectively also is critical. Changing from the predominant whole-group instructional paradigms is not easy. The inclusion paradigm asks teachers to orient their efforts toward developing a community of learners and to use a repertoire of strategies for meeting individual learning needs. Research suggests that helping teachers build a repertoire of accommodations they can use spontaneously, as needs arise, should be a critical training focus (Schumm et al., 1995).

Considerable evidence suggests that teacher training should focus heavily on the development of strong classroom management skills as a means of enhancing children's learning and academic performance (Wang et al., 1993/94). This is particularly true of inclusion programs for early childhood, such as the ECI Model, that have flexible, open learning environments and that serve children whose characteristics and abilities are diverse. Teachers and staff must become adept at helping young children acquire prosocial behaviors and self-control in a culturally and linguistically pluralistic environment.

When young children are linguistically diverse, a knowledge of theory and practice related to second language acquisition and bilingual education is vital. Inclusion is advanced when all staff members are familiar with strategies for supporting children's home languages and cultures. This is true regardless of the staff member's ability to speak and understand the home languages. Teachers who *are* proficient in more than one language, however, set an excellent example (Medina, 1995; Teachers of English to Speakers of Other Languages, Inc., 1995). Therefore, teacher preparation programs need to be reconfigured to place greater emphasis on the acquisition of biliteracy, especially for those teaching in early childhood and elementary levels.

Technology is another important focus. Declining costs are likely to result in increasing use of computers and assistive technology options that enhance the functioning of young children with disabilities in early learning environments. Consequently, teachers need training to use computers and properly manage

assistive technology devices (Parette, Hourcade, & VanBiervliet, 1993). Teachers must become competent in using technology-based instructional strategies, to ensure the proper use of technological tools for enhancing children's learning. Furthermore, technology can help streamline some of the tasks teachers must perform in ECI settings. Valuable technological tools are available for use in assessment, planning, and instruction, reducing the complexity and time needed to accomplish these tasks.

Considering the ecobehavioral orientation presented in Chapter 4, the training most preservice teachers receive seems woefully inadequate. Education students draw floor plans or diagrams of model early childhood settings that are evaluated in terms of traffic patterns, delineations of activity areas, or other physical components. When teacher education programs treat environmental design only from the physical perspective, teachers are not prepared to deal with interactions of the variables that Gifford (1997) and other environmental psychologists warn have such a critical effect on children's learning.

Care should be taken in selecting the practices that will be the focus of inservice training programs. Rather than merely introducing the newest strategies or latest innovations, the practicality and fit of practices should be considered. Practices are more likely to be implemented when they match a teacher's time constraints, resources, routines, and instructional goals (Wang et al., 1993/94).

Inservice and prospective teachers alike must engage in multidisciplinary study to know what practices have been recommended and validated across different fields that address the care and education of young children. Equally important, teachers must attain proficiency in matching their practices to the needs of individual children, and in developing expertise in effectively implementing a greater repertoire of techniques.

Attitudinal Aspects of Training

The ECI Model presented in this book requires teachers to re-examine their attitudes about culture, ethnicity, disabilities, gender, and other sensitive issues. Attitude is a variable that cannot be erased from personnel preparation and training agendas. Teachers' attitudes affect their treatment of children, the expectations they convey to children, and their overall philosophy of caregiving and teaching in inclusion models. Many believe equity training must be provided to achieve learning environments that are fair and supportive of girls, children of color, children with disabilities, and linguistically diverse children (Banks, 1993; Derman-Sparks & ABC Task Force, 1989; Mann, 1994; York, 1991, 1992). All personnel within an inclusive early childhood program must relay the pro-diversity stance of the program. Teachers, administrators, clinicians, and support staff need special training to work effectively with children from linguistically and culturally diverse families and communities. The staff must be cohesive and soundly prepared (Fern, 1995; Medina, 1995; Teachers of English to Speakers of Other Languages, Inc., 1995).

Reuven Feuerstein believes that teachers' attitudes must be the first target of training efforts. From his viewpoint, this training should have a visionary focus. That is, the content of the training must convey the entire philosophy of a program, rather than merely how to teach within the structure of the program. Feuerstein stresses

that teachers must operate from a deep belief that children can learn. Moreover, it is imperative that teachers believe they can have a positive effect on that learning (Goldberg, 1991). Asa Hilliard warns that restructuring and reform will not work unless the goal is help each child attain his or her maximum level of excellence (Hilliard, 1991).

Training Methods

Knowledge of strategies and belief that these practices work do not guarantee implementation. Undoubtedly, inclusion represents varying degrees of change for personnel. For some teachers and staff, the required change in attitudes and practices will be greater than for others. Fullan and Miles (1992) emphasize the importance of understanding the change process. Change is a process, rather than a template. Consequently, stakeholders must learn and take risks as they move toward ownership of the changes (Fullan & Miles, 1992). Personnel training must be planned to support each staff member's change process. Consultant models that provide ongoing feedback and support slow change are preferred over "one-shot" transmission methods. Ongoing, effective training supports the implementation efforts of teachers, with provisions for follow-up and feedback (Joint Committee on Teacher Planning for Students with Disabilities, 1995; Schumm, Vaughn, Gordon, & Rothlein, 1994; Wesley, 1994).

Prospective early childhood teachers will benefit from multidisciplinary studies to gain professional knowledge and develop a repertoire of teaching strategies interwoven with field experience. Sapon-Shevin (1990) warns that relegating specific instructional strategies to the domain of specialists can inhibit teachers in inclusion settings from developing expertise in using those strategies. As boundaries between specialized fields and general education settings are erased, teachers must be empowered to teach all children and gain confidence in using a full repertoire of instructional strategies and accommodations (Sapon-Shevin, 1990). Field experiences, beginning early in the preparation program, offer opportunities to integrate professional knowledge with actual experience. With the guidance of mentor teachers in field settings, interns gain practice in differentiating instruction for children by using various teaching methods and instructional materials. Field experiences also offer chances to gain valuable insights into the families, cultures, and linguistic contexts of young children. Therefore, the student teaching experience is the most critical aspect of preservice preparation. During this experience, prospective teachers develop their personal philosophy and style as they gain in teaching proficiency. It is critical for teacher education programs to plan a multifaceted course of study and field experiences that address a full range of diversity and abilities (Saracho & Spodek, 1995).

RESEARCH

Accumulate a Research Base

We need longitudinal studies of early childhood program models for inclusive education that give teachers a framework for implementing effective changes. Practices must be validated for groups of young children representing different compositions and proportions in terms of culture, lan-

guage, gender, and ability. For example, we need to identify the instructional practices that best accommodate children with specific disabilities, such as deafness or visual impairments.

Research also is needed to clarify the effects of inclusive education programs with heterogeneous configurations that include a high proportion of children with a certain trait, characteristic, ability level, or disability. Disproportionately high numbers of children with a specific disability may be deliberately included in a particular classroom. At times, this imbalance occurs when specialized personnel, equipment, or resources are in short supply, although it also can result from misguided attempts to conserve financial resources. In other cases, when administrators depend on volunteers to staff inclusive education classrooms, hesitancy or lack of interest may mean that few teachers volunteer. Consequently, those who do volunteer may have classrooms with disproportionate numbers of children with disabilities or other special needs. We do not know the effects of this "clustering." We do not know at what point the disproportion becomes more analogous to segregation, rather than integration. When do we lose the possible benefits of a heterogeneous grouping?

Interdisciplinary Perspectives

It is important to view inclusion and developing models from an interdisciplinary perspective. Inclusive education models developed and evaluated from an interdisciplinary perspective are most likely to be sufficiently flexible to fit the needs of diverse groups of children. The integrative nature of inclusive early childhood programs requires that investigators scrutinize program aspects that use perspectives associated with various disciplines and fields of education. For example, valuable insights can be gained by evaluating physical environments from the perspective of environmental psychologists (as illustrated in Chapter 4). Instructional methodology in inclusive programs also must reflect research from various fields.

If teachers are to move from undifferentiated curricula and approaches toward more flexibility to accommodate individual children, research must be accumulated to guide their efforts. Simply identifying the kinds of practices and adaptations that appear effective is insufficient. At least one study suggests that implementation procedures also influence the effectiveness of adaptations. The findings of Zigmond and Baker (1996) imply that future investigators should examine not only whether adaptations are used, but also how they are applied. Research must determine if globally applied adaptations are as effective as those aimed at individual children (Zigmond & Baker, 1996).

Environmental Design

While environmental influences are well-recognized, little empirical research documents the precise nature of these influences. During the era of open-space classrooms in the 1970s, a steady stream of attention was given to the study of variables that affect children in educational environments. Since that time, however, research has slowed to a trickle. A more complete understanding of environmental dynamics would contribute to more effective inclusion. Research is needed to identify variables

and establish the effects of these factors on children with different characteristics. Clarification of the effects, however subtle, that environmental variables exert, singly and in interplay with one another, must be empirically established. Such findings could have a profound effect on the physical design of inclusive early childhood settings, and enhance the chances of individual children to succeed in these settings.

Ecobehavioral Analysis

The diversity of inclusive early childhood programs indicates a need for empirical research designs that take into account the various ways these settings are unique. Richarz (1993) calls for the use of multivariate research designs to examine the effectiveness of curricula for inclusion programs. Research designs that employ components of ecobehavioral analysis show great promise. As a method of inquiry, ecobehavioral analysis techniques appear equal to the task of examining the complex ecologies that inclusive early childhood environments represent.

Ecobehavioral analyses give a more extensive view of a learning environment using an ecological perspective. This comprehensive analysis takes into account the complexity of learning ecologies, as discussed in Chapter 4. While ecobehavioral analyses presently are used primarily for research purposes, technology now makes them more feasible for use as instructional planning tools.

Administratively, ecobehavioral assessment has potential for providing information that can be used in accountability, placement decisions, and planning for staff development. When children with disabilities are included in general early childhood settings, ecobehavioral assessments can be used to aid in the selection of "least restrictive environments" and to assist in plans for a smooth transition. When linguistically diverse young children attend inclusive programs, these measures can help determine whether the instructional environment offers sufficient opportunities to promote their successful achievement.

Ecobehavioral assessment has the potential to help multidisciplinary planning teams make more informed decisions regarding programs and the progress of individual children in those settings. A common assumption has been that when a child fails to progress in a setting, a mismatch has occurred. Many people assume, sometimes too quickly and without thorough analysis, that the setting is inappropriate for the child or that the challenges of the curriculum exceed the child's capability. Through comprehensive analysis, ecobehavioral assessment could assist teams in pinpointing troublesome components of the learning environment, or in designing more effective intervention strategies that would allow a child to remain in the inclusion setting and achieve greater success.

CONCLUSION

The inclusive education movement has ushered in an era that is ripe for innovation, as professionals in various fields, including early childhood education, strive to meld their philosophical stances and pedagogical approaches to achieve the goals of inclusion. Teachers in early childhood programs now have the freedom to use a broader mix of practices, gathered from across disciplines and fields, to meet young children's

needs. Innovation is no substitute, however, for well-designed empirical research to guide our efforts. In 1991, Wolery identified a large number of unknowns in early childhood special education practice that require examination through empirical inquiry. It is important to note that in the inclusive early childhood movement of today, early childhood special education is only one of the fields that contribute to the concept of inclusion proposed in this book (see explanation in Chapter 1). Meeting the learning needs of young children today requires research that crosses fields and disciplines. Therefore, it appears we have only begun to scratch the surface to obtain the empirical evidence needed to understand what teachers in these complex inclusive early childhood education settings face, and to understand how to equip them with efficacious strategies and practices.

While inclusion has been practiced in early childhood to varying degrees for more than two decades, the diversity of children in early childhood settings is rapidly increasing. Consequently, there is a great urgency to accumulate a research base to guide efforts toward greater inclusiveness. Valid empirical evidence will help resolve areas of controversy and establish precedents that can guide policymaking and practice. Abundant evidence points to the early childhood years as a critical period in the growth and development of children. The stakes are exceedingly high, and the impact of inclusion is being felt widely. Support for research is critically needed to lessen the gap between the social ideals we seek to achieve and what we know about how to accomplish those ideals. Not since the War on Poverty in the 1960s has there been a substantial flow of federal support for the development of early childhood program models. Although the last quarter of the century has been a time of unprecedented social change, political change that honors the civil and educational rights of young children, calls for reform to improve the quality of education, and fiscal support to establish inclusive early childhood models and to validate practices for inclusion have not been forthcoming. We must advocate for this support as an essential component of efforts to maximize the early childhood years of each child.

CLOSING THOUGHTS

Children. A sense of richness surrounds that word. It is a special word that embodies plurality, diversity, and heterogeneity. Each child is a unique and intriguing mixture of mystery and promise. Despite everything we know about how children develop and learn, many threads remain to be untangled. How we choose to address children's needs says much about the humanity or inhumanity of society. If we ignore our children today, we must deal with the problems of adults tomorrow. The choice is ours. If we choose to nurture our children, this cycle of nurturance will be renewed generation after generation. Therefore, it is imperative that we continue to seek solutions to the problems children currently face. It is not enough to be good teachers and caregivers. We must, first and foremost, be advocates for children and allies to their families. From this perspective, seeking effective ways of responding to the needs of young children and their families serves all humankind. Inclusion is one way of responding.

References

Bailey, D. B., & Wolery, M. (1992). *Teaching infants and preschoolers with disabilities* (2nd ed.). New York: Merrill/Macmillan

Banks, J. A. (1993). Multicultural education: Development, dimensions, and challenges. *Phi Delta Kappan, 75*(1), 22-28.

Barbour, N. (1992). Early childhood gifted education: A collaborative perspective. *Journal of the Education of the Gifted, 15*(2), 145-162.

Bredekamp, S. (Ed.). (1987). *Developmentally appropriate practice in early childhood programs serving children from birth through age 8.* Washington, DC: National Association for the Education of Young Children.

Bredekamp, S., & Copple, C. (Eds.). (1997). *Developmentally appropriate practice in early childhood programs* (Rev. ed.). Washington, DC: National Association for the Education of Young Children.

Bricker, D., & Cripe, J. J. W. (1992). *An activity-based approach to early intervention.* Baltimore: Paul H. Brookes.

Carta, J., Atwater, J., Schwartz, I., & McConnell, S. (1993). Developmentally appropriate practices and early childhood special education: A reaction to Johnson and McChesney Johnson. *Topics in Early Childhood Special Education, 13*(3), 243-354.

Carta, J., Schwartz, I., Atwater, J., & McConnell, S. (1991). Developmentally appropriate practice: Appraising its usefulness for young children with disabilities. *Topics in Early Childhood Special Education, 11*(1), 1-20.

Carta, J. J. (1994). Developmentally appropriate practices: Shifting the emphasis to individual appropriateness. *Journal of Early Intervention, 18*(4), 342-343.

Derman-Sparks, L., & ABC Task Force. (1989). *Anti-bias curriculum: Tools for empowering young children.* Washington, DC: National Association for the Education of Young Children.

Division for Early Childhood of the Council for Exceptional Children. (1993). *DEC Recommended practices: Indicators of quality in programs for infants and young children with special needs and their families.* Reston, VA: Author.

Division for Early Childhood of the Council for Exceptional Children, National Association for the Education of Young Children, & Association of Teacher Educators. (1995). *Personnel standards for early education and early intervention: Guidelines for licensure in early childhood special education.* Pittsburgh, PA: Division for Early Childhood Council for Exceptional Children.

Fern, V. (1995). Oyster school stands the test of time. *Bilingual Research Journal, 19*(3&4), 497-512.

Fullan, M. G., & Miles, M. B. (1992). Getting reform right: What works and what doesn't. *Phi Delta Kappan, 73*(10), 745-752.

Gifford, R. (1997). *Environmental psychology: Principles and practice* (2nd ed.). Boston: Allyn and Bacon.

Goldberg, M. F. (1991). Portrait of Reuven Feuerstein. *Educational Leadership, 49*(1), 37-40.

Hilliard, A., III. (1991). Do we have the will to educate all children? *Educational Leadership, 49*(1), 31-36.

Johnson, J. E., & Johnson, K. M. (1992). Clarifying the developmental perspective in response to Carta, Schwartz, Atwater, and McConnell. *Topics in Early Childhood Special Education, 12*(4), 439-457.

Johnson, J. E., & Johnson, K. M. (1994). The applicability of developmentally appropriate practice for children with diverse abilities. *Journal of Early Intervention, 18*(4), 343-346.

Joint Committee on Teacher Planning for Students with Disabilities. (1995). *Planning for academic diversity in America's classrooms: Windows on reality, research, change, and practice.* Lawrence, KS: The University of Kansas Center for Research on Learning.

Lay-Dopyera, M., & Dopyera, J. E. (1992). Strategies for teaching. In C. Seefeldt (Ed.), *The early childhood curriculum: A review of current research* (2nd ed., pp. 16-41). New York: Teachers College Press.

Mallory, B. L. (1994). Inclusive policy, practice, and theory for young children with developmental differences. In B. L. Mallory & R. S. New (Eds.), *Diversity and developmentally appropriate practices: Challenges for early childhood education* (pp. 44-61). New York: Teachers College Press.

Mallory, B. L., & New, R. S. (1994). Social constructivist theory and principles of inclusion: Challenges for early childhood special education. *The Journal of Special Education, 28*(3), 322-337.

Mann, J. (1994). Bridging the gender gap: How girls learn. *Streamlined Seminar, 13*(2), 1-5.

McLean, M., & Odom, S. (1993). Practices for young children with and without disabilities: A comparison of DEC and NAEYC identified practices. *Topics in Early Childhood Special Education, 13*(3), 274-292.

Medina, S. L. (1995). K-6 bilingual programs in the Los Angeles metropolitan area. *Bilingual Research Journal, 19*(3&4), 629-640.

New, R. S. (1994). Culture, child development, and developmentally appropriate practices: Teachers as collaborative researchers. In B. L. Mallory & R. S. New (Eds.), *Diversity and developmentally appropriate practices: Challenges for early childhood education* (pp. 65-83). New York: Teachers College Press.

New, R. S., & Mallory, B. L. (1994). Introduction: The ethic of inclusion. In B. L. Mallory & R. S. New (Eds.), *Diversity and developmentally appropriate practices: Challenges for early childhood education* (pp. 1-13). New York: Teachers College Press.

Parette, H. P., Jr., Hourcade, J. J., & VanBiervliet, A. (1993). Selection of appropriate technology for children with disabilities. *Teaching Exceptional Children, 26*, 18-22.

Richarz, S. (1993). Innovations in early childhood education: Models that support the integration of children of varied developmental levels. In C. Peck, S. Odom, & D. Bricker (Eds.), *Integrating young children with disabilities into community programs: Ecological perspectives on research and implementation* (pp. 83-107). Baltimore: Paul H. Brookes.

Sapon-Shevin, M. (1990). Gifted education and the de-skilling of classroom teachers. *Journal of Teacher Education, 41*(1), 39-48.

Saracho, O. N., & Spodek, B. (1995). Preparing teachers for early childhood programs of linguistic and cultural diversity. In E. E. Garcia, B. McLaughlin, B. Spodek, & O. N. Saracho (Eds.), *Meeting the challenge of linguistic and cultural diversity in early childhood education* (Vol. 6, pp. 154-169). New York: Teachers College Press.

Schumm, J. S., Vaughn, S., Gordon, J., & Rothlein, L. (1994). General education teachers' beliefs, skills, and practices in planning for mainstreamed students with learning disabilities. *Teacher Education and Special Education, 17*(1), 22-34.

Schumm, J. S., Vaughn, S., Haager, D., McDowell, J., Rothlein, L., & Saumell, L. (1995). General education teacher planning:

BEST COPY AVAILABLE

What can students with learning disabilities expect? *Exceptional Children, 61*(4), 335-352.
Teachers of English to Speakers of Other Languages, Inc. (1995). TESOL statement on the role of bilingual education in the education of children in the United States. *Bilingual Research Journal, 19*(3&4), 661-669.
Wang, M. C., Haertel, G. D., & Walberg, H. J. (1993/94). What helps students learn? *Educational Leadership, 51*(4), 74-79.
Wesley, P. W. (1994). Providing on-site consultation to promote quality in integrated child care programs. *Journal of Early Intervention, 18*(4), 391-402.
Winter, S. M., & Van Reusen, A. K. (1997). Inclusion and kindergartners who are deaf or hard of hearing: Comparing teaching strategies with recommended guidelines. *Journal of Research in Childhood Education, 11*(2), 114-134.
Wolery, M. (1991). Instruction in early childhood special education: "Seeing through a glass darkly . . . knowing in part." *Exceptional Children, 58*(2), 127-135.
Wolery, M., Strain, P. S., & Bailey, D. B., Jr. (1992). Reaching potentials of children with special needs. In S. Bredekamp & T. Rosegrant (Eds.), *Reaching potentials: Appropriate curriculum and assessment for young children* (Vol. 1, pp. 92-111). Washington, DC: National Association for the Education of Young Children.
Wolery, M., Werts, M. G., Caldwell, N. K., Snyder, E. D., & Lisowski, L. (1995). Experienced teachers' perceptions of resources and supports for inclusion. *Education and Training in Mental Retardation and Developmental Disabilities, 30*(1), 15-26.
York, S. (1991). *Roots and wings: Affirming culture in early childhood programs.* St. Paul, MN: Redleaf Press.
York, S. (1992). *Developing roots and wings.* St. Paul, MN: Redleaf Press.
Zigmond, N., & Baker, J. M. (1996). Full inclusion for students with learning disabilities: Too much of a good thing? *Theory Into Practice, 35*(1), 26-34.

BEST COPY AVAILABLE

0-87173-148-7

Association for Childhood Education International
17904 Georgia Ave., Ste. 215, Olney, MD 20832
800-423-3563 • www.udel.edu/bateman/acei

ISBN 0-87173-148-7

BEST COPY AVAILABLE